

Precinct Structure Plan 1067 Donnybrook

Aboriginal Heritage Impact Assessment



Sponsor: Growth Areas Authority
Cultural Heritage Advisor: Andrew Orr
Author: Andrew Orr

Date: 24 September 2013

TERRACULTURE
HERITAGE CONSULTANTS

113 Victoria Road
Northcote, VIC, 3070
Ph: (03) 9486 4524
inquiries@terraculture.com.au

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Executive Summary

TerraCulture Heritage Consultants Pty Ltd has been engaged to undertake an Indigenous cultural heritage values assessment to assist in the preparation of Donnybrook Precinct Structure Plan (PSP 1067). Woodstock is approximately 30 kilometres north of Melbourne (Map 1).

Desktop Assessment

The Desktop Assessment covers the entire PSP area. A search of the Victorian Aboriginal Heritage Register showed that there are twelve registered Aboriginal Cultural Heritage Places within the subject land. These consist of seven artefact scatters and five scarred trees. The predominant site types in the broader region are artefact scatters, scarred trees, and isolated artefacts. Silcrete is the most common raw material found in stone artefact sites, followed by quartz.

Standard Assessment

The Standard Assessment covers those properties within the PSP area to which the consultants were granted access. The survey identified four new stone artefact sites and re-identified one of two scarred trees previously recorded from within the survey area;

- Donnybrook 2, VAHR 7922-1316
- Donnybrook 3, VAHR 7822-3600
- Donnybrook 4, VAHR 7822-3601
- Donnybrook 5, VAHR 7822-3596
- Bald Hill 3, VAHR 7822-0711

The areas of sensitivity are outlined in Table 1.

Landform Unit	Number of Aboriginal Places	Sensitivity
Flat Basalt Plains	0	Low
Stony Rises	4	High
Creeks, Waterways and Wetlands	1	High

Table 1: Summary of Sensitivity Assessment

Management Recommendation

The following recommendations have been prepared;

Recommendation 1: Preparation of Cultural Heritage Management Plans (CHMPs)

CHMPs are recommended for future development activities at all properties with the exception of property 39. The Aboriginal Heritage Act 2006 allows for the preparation of CHMPs that are Mandatory (triggered by the Aboriginal Heritage Regulations 2007, required by the Minister, or triggered by an Environmental Effects Statement) or Voluntary. The Act allows for the preparation of a Voluntary CHMP where regulatory triggers are not met¹.

¹

[http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e92000e23be/481F4F0770858034CA257169001D1F4A/\\$FILE/06-016a.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e92000e23be/481F4F0770858034CA257169001D1F4A/$FILE/06-016a.pdf)

CHMPs can occur as a single CHMP covering the entire PSP or as several smaller permits covering parcels of land as part of staged development applications. The Registered Aboriginal Party (RAP) for this area is the Wurundjeri Tribe Land Compensation and Cultural Heritage Council Inc. advised the GAA that they prefer that PSP 1067 is undertaken in smaller parcels of land rather than as a whole (pers. comm. Catherine Tucker, TerraCulture with Fiona McDougall, GAA). CHMPs enable subsurface testing to be undertaken and in this way a more thorough understanding of archaeologically sensitive areas (including stony rises), site extents and significance of the identified sites can be undertaken. Subsurface testing would provide a level of assessment of the Activity Area that is not possible through survey alone. Undertaking CHMPs early in the PSP process would allow for sensitive Places to be identified to specific locations and then for the urban planning to address retention and protection of Aboriginal Places.

Recommendation 2 - Vegetation removal

Extensive grass cover prevented the ground surface assessment in most of the Activity Area. If possible, a regulated burn-off could assist visibility as it removes all grass and allows greater inspection of the ground surface. Archaeological surveys are often undertaken following bushfires (if possible), and it has proven to be an effective situation for identifying archaeological sites. Other methods of vegetation removal such as slashing actually cover the ground and inhibit visibility, while poisoning is problematic for environmental considerations. In addition, mechanical equipment is often ineffective for vegetation removal on stony rises and may potentially disturb the soil profile. A controlled burn-off is a suggested means of vegetation removal but it is not a requirement for any further assessment. Alternatively should none of these suggestions be suitable then allowance should be made for a subsurface testing methodology that would address the issue of poor ground surface visibility. This would mean a longer program of subsurface testing using a combination of mechanical and hand investigation.

Recommendation 3 - Protection of Aboriginal Places

All Aboriginal cultural heritage places should be considered for retention, in consultation with the Registered Aboriginal Party: Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated. If not possible to retain all Places, retention of a sample of the Aboriginal Places could occur within open spaces and reserves, subject to future discussion between stakeholders including the Wurundjeri and Local Council. Management measures for individual Aboriginal Places will be developed on a case by case basis through future CHMP processes (see recommendation 1 above).

Owing to the limitations of the assessment (poor ground surface visibility and that no subsurface testing was undertaken) it is likely that there are substantially more Aboriginal places in the Activity Area than those identified to date.

Recommendation 4 – Stony Rises

The landform of PSP 1067 has been identified as containing stony rises. Two of these are located in Parcels 45, 32 and 33 and have been identified with Aboriginal Places (Donnybrook 2, 7922-1316, Donnybrook 3, VAHR 7822-3600 and Donnybrook 4, 7822-3601 respectively) and should be protected if possible. The remaining stony rises in surveyed areas of PSP 1067 have not been identified with Aboriginal Cultural Heritage (possibly because of poor visibility) but have been identified as potentially sensitive (see Map 5). However, not all stony rises will actually contain Aboriginal Cultural Heritage, but this can only be determined by subsurface testing. Should Aboriginal Cultural Heritage be identified on stony rises during the CHMP process then retention of these landforms should be considered.

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1. Introduction

TerraCulture Heritage Consultants Pty Ltd has been engaged to undertake an Aboriginal Heritage Impact Assessment (AHIA) to assist in the preparation of a Donnybrook Precinct Structure Plan (PSP) for future development of a 1,039 hectare site at Donnybrook. The Activity Area is approximately 30 kilometres north of Melbourne (Map 1).

2. Activity Description

The proposed activity will involve a residential development. The PSP (1,039 hectares gross) is expected to accommodate over 10,000 residential lots. The precinct will be serviced by Donnybrook Principal Town Centre (in the Lockerbie PSP to the west of the Donnybrook Precinct) and is expected to accommodate local town centres, community facility hubs, local active recreation reserves and potential regional active open space.

3. Extent of Activity Area

The Activity Area is located within the City of Whittlesea and Mitchell Shire Council Local Government Areas. The site is bordered by the Melbourne-Sydney Railway line to the west, Donnybrook Road to the south and the Outer Metropolitan Road /E6 reservation to the north. The boundary of the Woodstock PSP defines the eastern boundary. The Activity Area is largely rural agricultural land consisting of large open paddocks. Exceptions to this are smaller residential blocks fronting Donnybrook Road. The following table provides the details of the allotments within the Activity Area.

Address	Allotment	PSP Property Number
895B Donnybrook Road, Donnybrook 3064	3 PS334583	32
895A Donnybrook Road, Donnybrook 3064	3 PS334583	33
855 Donnybrook Road, Donnybrook 3064	1 PS334583	34
875 Donnybrook Road, Donnybrook 3064	2 PS334583	35
835 Donnybrook Road, Donnybrook 3064	2 PS 449806	36
825 Donnybrook Road, Donnybrook 3064	1 PS 449806	37
845 Donnybrook Road, Donnybrook 3064	1 TP 827515	38
905 Donnybrook Road, Donnybrook 3064	1 TP663551	39
915 Donnybrook Road, Donnybrook 3064	1 TP 248727	40
975 Donnybrook Road, Donnybrook 3064	1 TP 444829	41
1085 Donnybrook Road, Donnybrook 3064	1 LP 77367	42
300 Donovans Lane, Beveridge 3753	6 TP 394032	43
194 Donovans Lane, Beveridge 3753	1 TP 872961	44
300 Donovans Lane, Beveridge 3753	1 TP 709372	45
1025 Donnybrook Road, Donnybrook, 3064	1 TP 843230	31
	2 TP 843230	31
	1 LP 67181	31
	2 LP 67181	31

Table 1: Allotments within the subject land.

4. Documentation of Consultation

The *Wurundjeri* Tribe Land Compensation and Cultural Heritage Council Incorporated is a Registered Aboriginal Party (RAP) under the *Aboriginal Heritage Act* 2006 (Vic) and has responsibilities under that Act in relation to the management and administration of Aboriginal Cultural Heritage matters in the Activity Area. Consultation with the RAP is summarised below.

Date	Name	Consultation
28 Feb 2013	Andrew Orr (TerraCulture) Bruce Hunter (GAA) Fiona McDougall (GAA) Doreen Garvey (Wurundjeri) Tony Garvey (Wurundjeri) Bobby Mullins (Wurundjeri) Ron Jones (Wurundjeri) Darren Griffin (Wurundjeri) Alex Parmington (Wurundjeri)	Inception meeting at GAA Office. Introduced the project to the <i>Wurundjeri</i> , discussed the Activity and existing conditions of the Activity Area. There are presently two Aboriginal Places in the Activity Area but there is potential for Artefact Scatters and Scarred Trees.. Standard Assessment to occur in the next two – three weeks. DG noted that this stretch of Merri Creek had not been recently assessed by the Wurundjeri. DG and TG concerned whether allocated survey time will be enough. TG noted that high levels of salvage likely to be required. BH noted the presence of two hills; one to the north west and the southeast of the activity area.
04 March 2013	Andrew Orr (TerraCulture) Mike O'Connor (TerraCulture) Wade Garvey (Wurundjeri) Sean Wandin (Wurundjeri)	Properties 36, 37, 38, 39, 42 surveyed. No Aboriginal Places identified. WG and SW did not provide any comment relating to significance or cultural values.
05 March 2013	Andrew Orr (TerraCulture) Mike O'Connor (TerraCulture) Willie Xiberras (Wurundjeri) Gary Galway (Wurundjeri)	Properties 43 & 45 surveyed. Previously identified Scarred tree inspected (VAHR 7822-0711). One Artefact Scatter identified (VAHR 7922-1316). WX and GG did not provide any comment relating to significance or cultural values.
07 March 2013	Andrew Orr (TerraCulture) Mike O'Connor (TerraCulture) Thane Garvey (Wurundjeri) Jason Tweedie (Wurundjeri)	Property 41 surveyed. No Aboriginal Places identified. TG and JT did not provide any comment relating to significance or cultural values.
12 March 2013	Andrew Orr (TerraCulture) Jarrod MacCulloch (TerraCulture) Jason Tweedie (Wurundjeri)	Property 33 surveyed. One artefact scatter identified (VAHR 7822-3601). JT did not provide any comment relating to significance or cultural values.
13 March 2013	Andrew Orr (TerraCulture) Mike O'Connor (TerraCulture) Wade Garvey (Wurundjeri) Sean Wandin (Wurundjeri)	Properties 32 and 40 surveyed. One artefact scatter (VAHR 7822-3600) and one Low Density Artefact Distribution (VAHR 7822-3596) identified. WG and SW did not provide any comment relating to significance or cultural values.

Table 2: Consultation.

5. Desktop Assessment

The Desktop Assessment was completed by Andrew Orr (Senior Project Archaeologist) with research assistance from Jennifer McKeagney (Archaeologist, TerraCulture) and Brian Tseng (Historian, TerraCulture). The Geographic Region for this report comprises a 10km radius around the Activity Area as defined by the project brief.

5.1 Environmental Background

The following section provides background information on the physical context of the Donnybrook subject land. This information is used to model past human use of the landscape and the potential for archaeological remains or other types of heritage in the area.

The Activity Area is surrounded by rural properties within Donnybrook and is predominantly farm land with a number of rural buildings existing on the site. It consists of an undulating plain containing stony rises, minor waterways and swamps. Merri Creek crosses the north of the precinct.

5.1.1 Climate and Rainfall

Donnybrook has a temperate climate with cold to mild winters and hot summers. Average annual rainfall is between 600 and 900mm, falling evenly throughout the year. Summer temperatures are warm to hot – averaging 24 to 27 degrees Celsius. Winter temperatures are cold, averaging 9 to 12 degrees Celsius, with the lowest winter minimums in July and August. Donnybrook's climate provided no constraints to either Aboriginal or European settlement of the area.

5.1.2 Native Flora and Fauna

Remnant vegetation is usually a good indicator of the degree of ground disturbance and in turn a measure of the likelihood of *in situ* Aboriginal archaeological deposits, at least in shallow deposits. It is also a good indicator of the range of plant species available for use by the local Aboriginal groups during pre-contact times.

According to the Department of Sustainability and Environment bio-diversity mapping, the pre-European settlement Ecological Vegetation Classes (EVCs) of the Activity Area largely comprised Plains Grassland, with Plains Grassy Woodland in the northern extent, Riparian Scrub along the Merri Creek corridor and Swampy Woodland extending through the middle section from the west. The DSE website describes these EVC's as follows: Plains Grassland would have consisted of vegetation dominated by grass and herb life forms along with the occasional shrubs and trees; Plains Grassy Woodland would have consisted of an open, eucalypt woodland to 15 m tall with sparse shrubs over a ground layer of grasses and herbs; Riparian Scrub is often found along creeks and tributaries of the lowland plains and low hills and consists of a dense scrub; Swampy Woodland is open eucalypt woodland to 15m tall with a ground-layer dominated by tussock grasses and/or sedges and occurs on poorly drained, seasonally waterlogged heavy soils.

The 2005 EVC's show that the native flora and fauna of the Donnybrook region has been dramatically reduced and modified since European settlement; however, some remnant vegetation exists within the subject land, especially along the Merri Creek corridor, in the form of Plains Grassy Wetland, Plain Grassland and Plains Grassy Woodland.

5.1.3 Geology and Geomorphology

The survey area lies near the eastern extremity of the volcanic plains region, an area consisting of basaltic lava flows that range in age from the middle Pliocene to as recent as 6000 years ago. These flows are collectively known as the Newer Volcanics and cover an area of over 15,000 square kilometres from the South Australian border to the northern edge of Melbourne. More than 300 eruption points have been named such as Mt Fraser to the north west and Bald Hill at Kalkallo, located adjacent and close to the Activity Area. The Moormbool Fault line lies to the west and the Yarra Fault line to the south east (VandenBerg 1973: 15). Other features such as stony rises and lava tunnels are also present. On the Mt Fraser flow which is located to the east of Merri Creek there are crescent shaped mounds "...are well developed, and unusual, broad flat-topped stony rises lie above the general level of the basalt" (VandenBerg 1973: 24).

The basalt plains are not uniformly flat but contain a number of features, notably stony rises, creeks and rivers and ephemeral lakes or soaks. Stony rises occur in a number of forms but generically comprise loosely consolidated rocks and boulders elevated above the surrounding plain. Ephemeral lakes occur at low points often adjacent to the stony rises. In many areas, these temporary water sources have been accentuated and developed into dams for stock and irrigation. Soil development on the volcanic plains is generally quite poor, and screes of basaltic stone and larger basalt floaters lie close to the surface. At the same time, both the elevated stony rises and the margins of the lakes and soaks are known to be generally sensitive for Aboriginal archaeological material; having provided either resources or vantage points.

Deposits of Quaternary alluvium occur along the banks of the Merri Creek and its tributaries. This alluvium consists of gravels, sands and silts. It is likely that the local alluvial deposits have become more extensive since European settlement, following the clearing of native vegetation and the subsequent increased erosion of top soils.

The local hills and ridges including Mount Ridley (289m asl) immediately west of the Hume Freeway and Summer Hill (239m) and Woody Hill (280m) east of the Merri Creek consist of Silurian aged siltstone and thin-bedded sandstones dating to between 440 and 420 million years ago. Collectively this is known as the Dargile Formation and underlies these foothills and ranges.

Soils of the volcanic plains generally consist of sodic duplex soils, shallow gradational soils and grey and black clays (Land Conservation Council 1973: 300). Jeffery (1981) notes:

'The grey clay soils tend to be found on lower slopes, swales and low-lying alluvial terraces, where longer periods of waterlogging compared with the higher

slopes, have caused the soil to develop a grey colour... The black clay soils, uniform texture, coarse structure occur pre-dominantly on the better drained slopes of the undulating basalt plains. A small amount of sand occurs in these fine textured soils. This sand must have originated elsewhere and been blown or washed onto the basaltic soils... Duplex soils are the most common soils on the basalt plains. Their subsoils can be red, red-brown, or yellow-brown in colour, and they can be calcareous or both calcareous and sodic' (Jeffery 1981:14).

5.1.4 Hydrology

The Merri Creek crosses the north of the Activity Area. Merri Creek is the largest watercourse in the Donnybrook area, rising in the central highlands of Victoria and flowing in a southerly direction through the north of the Activity Area to meet the Yarra River at Clifton Hill. Tributaries of Merri Creek include Malcolm and Aitken creeks, which flow from the east and meet the Merri Creek at Craigieburn.

A number of smaller tributaries run into Merri Creek, including an unnamed tributary which runs through the south of the current Activity Area. Such ephemeral creeks also include Kalkallo Creek which runs through the township of Kalkallo, meeting Merri Creek south of Donnybrook Road.

Immediately to the southwest of the activity area, there are mineral springs which have a natural groundwater discharge (Ellender 1997: 9). The creeks and springs would have provided a reliable water source and land adjacent to creeks and tributaries has been shown to yield Aboriginal archaeological sites such as stone artefact scatters and scarred trees. Silicious raw materials that would be suitable for making Aboriginal artefacts are known to occur in similar geological contexts as occur along the Merri Creek (Hall 1989:7; Webb 1995).

At the time of European settlement, Merri Creek had good quality water and its environs were abundant with plant and animal life. John Batman was reported to have said that the Merri Creek was "a creek of good water in a most beautiful valley...altogether a most enduring spot" (cited in Wigney no date 14). The fertile land around the creek was suitable for crop, market gardening and dairying and as reported by Wigney (no date 14) the intensification of these landuse practices contributed to erosion, alteration in the water course and changes arising from the effects of flooding. More substantial changes to the quality of the water occurred through industrial activities that were established near the Merri Creek. Tanneries, wool washers and abattoirs all discharged into the creek. Further impacts were evident by residential subdivision and intensification of occupation in the Melbourne region. In the Donnybrook region the Merri Creek remains fairly rural in its setting and use which is in contrast to the alignment closer to Melbourne where in parts it is barely recognisable as a natural watercourse.

5.2 Historical and ethno-historical accounts in the geographic region

5.2.1 Chronology of Aboriginal Settlement

By at least 40,000 years BP, if not before, all parts of the Australian continent (Sahul) had

been colonised by Aboriginal people (Frankel 1995:15). This colonisation included the south-eastern corner of the continent. Aboriginal people have interacted with the land over a very long period of time and left behind countless traces of their lives.

The ways Aboriginal people adapted to climatic changes during the late Pleistocene and Holocene periods are difficult to determine without a more detailed chronology and other palaeoenvironmental and archaeological evidence. Certainly, these changes would have affected the demography of Aboriginal groups and the timing, duration and reasons for occupying different parts of Victoria. Some aspects of the local landscape may have remained constant, such as the local hydrology and by extension, the importance of major creeks as the principal source of water. Other features like vegetation would have evolved with changes in climate and sea levels. In contrast, there is significant evidence of Aboriginal occupation in the Late Holocene period across Victoria.

Climatic changes during the late Pleistocene and Holocene periods led to the occupation of the volcanic plains to the north of Port Phillip Bay. However, during the Holocene, Aboriginal people seasonally occupied both the coast and the hinterland (Coutts 1981: 15). The Small Tool tradition of the last 4,000 years is most prevalent in this southern region of Victoria (Frankel 1995: 141).

5.2.2 Ethnohistorical Review

Melbourne was one of the major locations from where Europeans colonised much of Victoria and there is a wealth of written and illustrated text on the Aboriginal people of the area. Europeans made first written observations on the Aboriginal people of the Port Phillip District from 1802, when explorers began to chart the entrance to Port Phillip Bay. While Melbourne was one of the locations from where much of southern Victoria was colonised, much of the written and illustrated text on the Aboriginal people of the area during the colonial period is limited to the remarks of a few observers.

Most of the text relates to 1835 onwards when there was a permanent European presence in the Port Phillip District and as such its value as a record of traditional Aboriginal life is debatable. Because Melbourne was settled by Europeans so intensively and at an early time relative to some other areas, the changes that had been wrought on the Aboriginal population by the time that ethnographic observations were made, makes such observations even less reliable than in other, less populated areas.

The primary sources of this ethnohistory have been collated by Clark (1990) in his reconstruction of traditional language boundaries in western Victoria. These sources include journal entries and government correspondence produced by explorers such as Matthew Flinders and Charles Grimes, as well as settlers and missionaries, particularly G.A. Robinson, the Chief Aboriginal Protector. Following Clark, in 1835 the subject land was located on the traditional lands of Aboriginal people known as the *Woi wurrung*, a language group whose territory centred on the Yarra River and its catchment areas and extending west to the Werribee River. In his report on Aboriginal language areas in Victoria (1996), Clark indicates that the name *Woi wurrung* is derived from a distinctive word for 'no'.

The spread of European settlement in the Port Phillip District from 1835 resulted in the rapid destruction of traditional life among the *Woi wurrung* speakers and little was recorded of their way of life prior to their displacement from their traditional lands. Perhaps one of the few early observers to record at least part of this traditional way of life at the time, as distinct from recollections many years later, was the Rev. J. R. Orton in his report to the Wesleyan Missionary Society in August 1836. In describing the people who resided around the new settlement at Port Phillip he wrote;

They associate in tribes and are in constant habit of wandering, having no houses of any description nor fixed place of abode, though in their wandering they generally confine themselves to certain limits, beyond which they seldom stray.

The only means of screening themselves from the inclemency of the weather is by erecting a sort of breakwind of boughs of trees, under the lee of which they squat or lie down and sleep for the night, and they usually seek for fresh quarters for the ensuing night wherever they may happen to be in the course of their excursions.

The whole tribe seldom wander together but separate into families consisting from ten to twenty persons, to scatter themselves for the purpose of obtaining food. The men hunt and fish for their subsistence. The kangaroo and opossum are the principal objects of their hunting pursuits, which they practice in a singular and artful manner. They usually cover themselves completely with green boughs of trees so as to resemble a bush, then they move gently along so as to be unperceived by the unsuspecting object of their prey, until they are within reach by their spear, which they use with great dexterity and throw to considerable distance with amazing force and precision. Having struck the animal they throw off their disguise, advance and secure their game.

The women, during the hunting excursions of the men, are generally employed gathering succulent roots which are their only substitute for bread and form a principal ingredient of their food.

...

Their clothing principally consists of a garment of kangaroo or opossum skins, sewn together with the fibrous parts of the animal, which they throw over their shoulders and which reaches down to the knees. Their hair is black, coarse and long, usually decorated with kangaroo teeth, claws of animals, bones of fish, pieces of earthenware and buttons obtained from Europeans, or anything of the kind.

Many of them have their faces whimsically painted and have fish and other small bones pierced through the ears, and other small bones on the dividing cartilage of the nose, which are worn as ornamental appendages. (in Cannon (ed) 1982: 82-84)

This description of a way of life that was already vanishing, seen through the eyes and prejudices of an Englishman of the time, is one of the few contemporary accounts of *Woi wurrung* traditional life before the loss of their traditional land changed that life forever. By 1839 the Rev Orton had recognized that European settlement had resulted in the loss of the traditional hunting grounds and their way of life (in Cannon (ed) 1982: 120).

Presland (1994) attempted to describe camp life as it would have been for the *Woi wurrung* at a camp on the Yarra River. He has used a variety of evidence in describing how the people would have utilized the resources available including what is known or deduced from adjoining language groups. There was a division in labour in food gathering, women gathering vegetable foods from a variety of sources while the men hunted the larger game including kangaroos and possums as well as fishing and eel catching. Skins from possums and kangaroos were used for clothing while kangaroo teeth were used for decoration. Decorative items were also made using reeds, feathers and other items. Seeds were ground to produce flour for making a roasted cake, using large grinding slabs and pestles.

As Presland points out, the historical records compiled by early European observers of Aboriginal life are one of the major sources of how the *Woi wurrung* lived during the early days following European settlement, but these records are conditioned by the biases and misconceptions of the observers and from an ethnocentric point of view (1994: 115-117).

The *Woi wurrung*

Of the four *Woi wurrung* clans, the clan most closely associated with the Donnybrook area was the *Wurundjeri willam*, a patriline of the *Wurundjeri balug*. The *Wurundjeri willam* were based along the Yarra and Plenty rivers (Clark 1990: 384). The *Wurundjeri willam* were in turn divided into a number of smaller clans. Following Clark (1990: 385-386 and Figure 13), Billibillary's mob, whose territory included the area "W. of Darebin Creek to E. bank of Saltwater (Maribyrnong) River and Jackson's Creek, N to near Mt. William quarry", were the prior Aboriginal occupants. Billibillary is recorded as being a signatory of the Batman Treaty in 1835 and also the guardian of the important Mount William greenstone quarry, located near Lancefield (Clark 1990: 385).

Hunting and Gathering

There are few historic details on traditional *Woi wurrung* subsistence for the language group as a whole. It is likely that *Woi wurrung* patterns of settlement and movement were based on seasonal rounds following the changing availability of plant and animal resources. Historical details on how animals were traditionally procured (the techniques of hunting) and how and when plants were harvested are extremely poor for most of Aboriginal Victoria. It is known that the *Woi wurrung* used spears to hunt and that hunters would hide behind vegetation or construct hides of stone. Nets were also used where game animals would be chased into them.

Certain foods are common to many accounts including: the Yam daisy or *Murnong*, the tuber of which was dug up by women; bull-rush roots which were collected from waterways and roasted; eels, which were a seasonal food caught in stone weirs and long fibre nets;

kangaroos and other smaller macropods which were hunted; birds and their eggs; possums - the fur of brush tail possums was used to make cloaks and the meat roasted and according to Presland (1994) preserved for later use. Possum skin cloaks were a prestige item; there are only two surviving examples of traditional cloaks.

The *Woi wurrung* Clans in 1835

Several mission settlements and stations were established and abandoned during the quarter decade after 1835 including at South Yarra (1837) and Narree Warren (1840). In 1859 a group of *Woi wurrung* and *Daung wurrung* settled on land below the junction of the Acheron and Little Rivers near Yea in an attempt to establish a 'block of land in their country where they may sit down, plant corn, potatoes, etc. – and work like white men' (Barwick 1998: 40-41). Opposition from European settlers eventually forced them to relocate at a new government station, Coranderrk at Healesville, in 1863 and it was to this mission that the remaining *Woi wurrung* and other Aborigines from the Port Phillip district were sent.

***Wurundjeri* and the Merri Creek Environs**

Merri Creek is possibly the location where John Batman signed what he described as a land sale treaty with the Aborigines (Faithfull 2001: 18), Merri Creek - "merri merri" means very rocky in Woiworung language (Faithful 2001: 18). Faithfull reports that early settlers sometimes caught glimpses of Aboriginal ceremonies conducted on the banks of Merri Creek (2001: 57). The Native Police Corps was initially established at Narre Warren but it was moved in 1842 to Merri Creek (Faithfull 2001: 90). The troops patrolled the area and were sent farther afield. In 1845 the Merri Creek Aboriginal School was established by the Melbourne Baptist congregation at the junction of the Yarra River and Merri Creek (Faithfull 2001: 94). The school tried to teach an English standard curriculum but this was incompatible with a desire of the Wurundjeri to maintain original teachings of lore and initiation (Faithfull 2001: 96). The school closed in 1851 when school attendance numbers fell to a level that could not sustain the cost.



Figure 1 – Merry [Merri] Creek (Plenty Ranges) from Troedel, Charles 1836-1906 album, State Library of Victoria. (<http://www.slv.vic.gov.au/platebk/gid/slv-pic-aac05052>)

5.2.3 Early European Settlement

In the mid-1830s permanent European settlement of Victoria commenced with the arrival of the first squatters. A treaty was signed in 1835 by John Batman and elders of the Woiwurrung (east of the Werribee River) for an arrangement to exchange supplies of basic goods for the provision of 600,000 acres of land (Kociumbas 1992: 190-191). The treaty was never recognised by the Government in NSW.

By 1838 squatters had moved into large areas of Victoria and usurped large tracts of land from the resident Aboriginal people for the purpose of grazing livestock. Spreadborough and Anderson (1983: ix) discuss the 'squatting expansion' between 1834 and 1860, noting that '...it was the early squatters who were permitted to become 'free' selectors, choosing and learning about their land with a fair degree of independence from official control'. The first decade of this expansion saw squatters taking up land across Victoria, particularly on the plains north of Melbourne and running westward to Geelong (Spreadborough & Anderson 1983: Figure 1).

5.2.4 Settlement of Donnybrook

Land sales commenced in the Parish of Kalkallo in 1840. Areas to the west of the Merri Creek along the current routes of the Hume Freeway and the North Eastern Railway were

purchased by people of English, Irish and Scottish descent (Payne 1980: 3). The land to the east of Sydney Road and north of the Yarra River was used for cropping particularly around Merri and Darebin creeks (Peel 1974: 20). In 1845 Peel lists the crops that predominated in these areas (see Table 3).

Location	Wheat	Barley	Oats	Potatoes	Maize	Garden	Peas
Merri Creek	2067	227	765	150	N/A	57	16
Darebin Creek	926	66	187	45	9	N/A	N/A

Table 3: Crop type in acres near Melbourne in 1845 (Peel 1974: 43 (after J.D. Lang Port Phillip p 102)

Also surveyed was the town of Donnybrook which at the time was the name given to the settlement west of the Merri Creek. Town allotments within Donnybrook were sold in 1853 and by the 1860s it was a developing township with shops, inns, police station, school and churches (Jones 1992: 86; Payne 1980: 5-47).

A major change to the area in the second half of the nineteenth century was the construction of the north-eastern railway line connecting Melbourne and Sydney. By the early 1880s, the town on the highway had changed its name to Kalkallo. "Donnybrook" then referred to the small settlement next to the train station, forming part of the current Activity Area. The railway section was completed in 1872 with a local station established at Donnybrook about two miles east of Kalkallo Township. The railway helped to consolidate and further expand agriculture in the region.



Figure 2 – Merri Creek, 1863, by Pilkington, Henrietta M. 1845-1927 artist. (<http://www.slv.vic.gov.au/pictoria/gid/slv-pic-aab37978>)

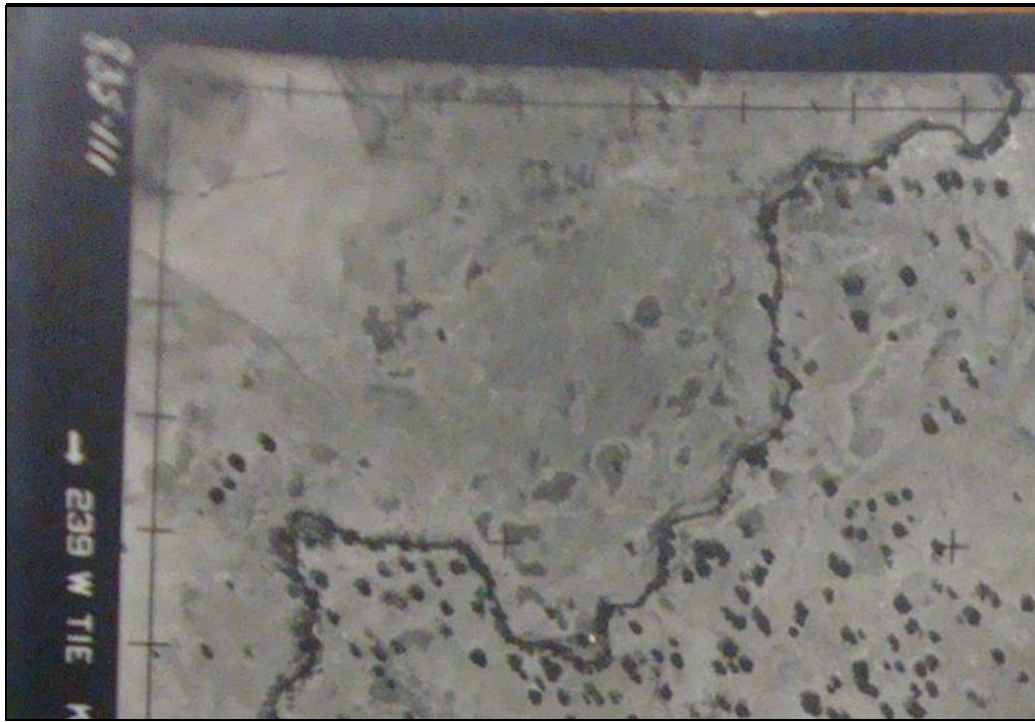


Figure 3 – Aerial Image Donnybrook 1950 showing PSP Prop No.s 43 and 45 and Merri Creek in north west of survey area.

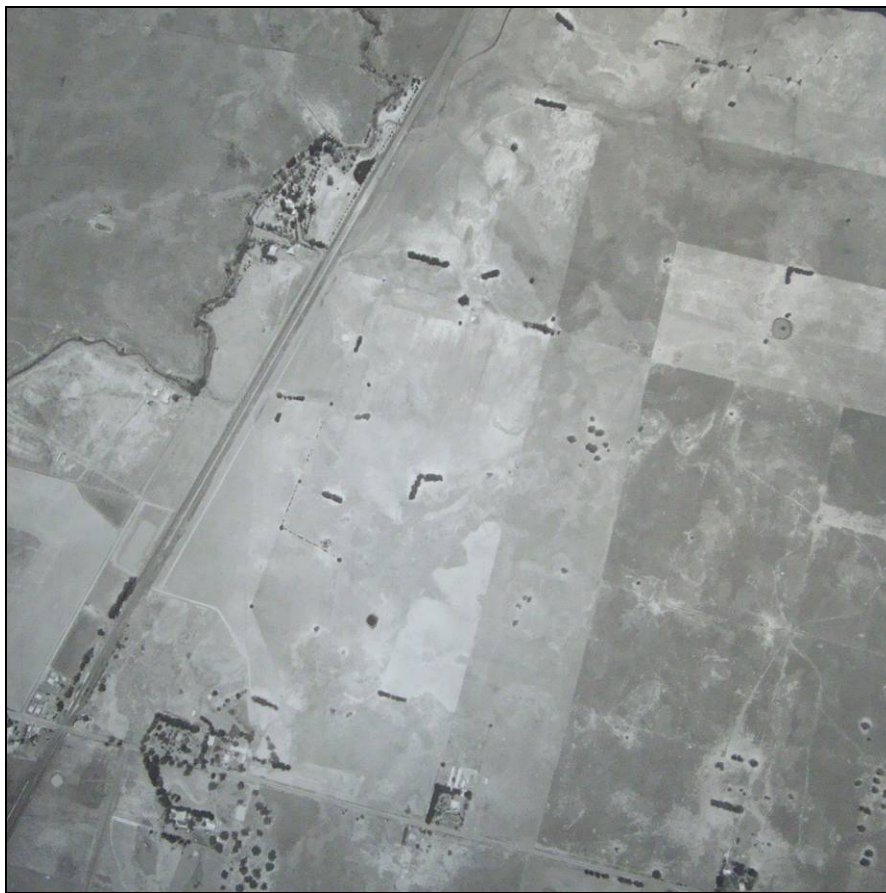


Figure 4 – Aerial Image Donnybrook 1968 showing south west of Activity Areaa (Intersection of Railway and Donnybrook Road in south west corner).

5.3 Aboriginal Cultural Heritage

5.3.1 Previous Archaeological investigations in the geographic region

The following is a summary of those archaeological reports that are relevant to this present report, especially those reports dealing with assessments of land within the geographic region.

There have been a number of studies conducted within the Donnybrook area, ranging from local to regional studies. The following section reviews the most relevant of these assessments.

Regional Studies

Ellender 1997

Ellender conducted an archaeological investigation of the Merri Creek from Craigieburn Road to Hernes Swamp north of Beveridge. The study included the Merri Creek Corridor as it passes through the north of the current Activity Area. Along this section of the Merri Creek the study recorded six Aboriginal archaeological sites including artefact scatters in both a surface and sub-surface context, as well as scarred trees. The study also identified zones of sensitivity described as: the whole of the creek unit 50 metres either side holds high sensitivity for all Aboriginal archaeological sites; the Craigieburn native grasslands from 50 metres either side of the Merri Creek corridor have a high sensitivity for small artefact scatters and scarred trees; and, the summits of the hills in the Merri Creek valley have moderate sensitivity for archaeological sites, but this was to be further investigated through sub-surface testing (Ellender 1997: 558).

Local Studies

The following table (Table 4) summarises those reports that are near the Activity Area but which are of sufficient distance to warrant them as studies that are peripheral to the present assessment. Those reports that are particularly relevant to the present assessment are discussed in greater detail following the table.

Report Author and Title	Location	Report Summary
Tulloch 2009	Activity Area North	Situated in the Boral land consisting of a targeted survey. Visibility was poor but one isolated artefact was identified.
Muir 1998	Hume Highway options west of Activity Area	The study area contained a creek valley, volcanic plains and stony rises and the assessment identified 13 Aboriginal Places comprising isolated artefacts or artefact scatters of quartz or silcrete.
Cekalovic 1999	Hume Freeway Donnybrook Road Interchange. West of the Activity Area	The study determined that specific land use in this area had affected the site prediction model for this study area. Cekalovic identified Merri Creek as a major waterway and Kalkallo Creek as a lesser resource to Aboriginal people. No Aboriginal Places were identified.
Light and Howell- Meurs 2002	Kalkallo township. West of Activity Area	A ground surface survey did not identify any Aboriginal Cultural heritage but the effectiveness of the survey was reduced because of poor surface visibility. Areas of sensitivity were identified to be Kalkallo Creek corridor and a stony rise.
Patterson, Paynter and Bell 2003	Southern side of Donnybrook Road. South and west of the Activity Area	Ground surface survey with variable visibility. Two Aboriginal Places were identified.

Matthews et al. 2005	Railway corridor for the Melbourne to Sydney line. West of the Activity Area	Fifteen Aboriginal Places were identified including isolated artefacts, artefact scatters and scarred trees.
Feldman, Howell-Meurs and Matthews 2007	CHMP for the passing lanes of the Melbourne to Sydney rail line. West of the Activity Area	The assessment identified ten Aboriginal Cultural heritage Places comprising isolated artefacts and artefact scatters associated with Merri Creek or stony rises.
Chandler 2008	Corner of Donnybrook road and Hume freeway. West of the Activity Area.	No Aboriginal Places were identified during the standard assessment but the consulted poor ground surface visibility as a possible cause. The subsurface testing identified two Aboriginal Places with artefacts recovered from shallow depths of 0-150mm.
Fiddian and Orr 2010	Lockerbie property located to the north west of the Activity Area	This preliminary assessment for a large property west of Merri Creek. The survey identified 14 Aboriginal Places comprising isolated artefacts and artefact scatters. Areas of sensitivity were identified along Merri Creek and on stony rises.
Orr In Prep	West of Activity Area, North of Donnybrook Road	Fieldwork has been completed for this CHMP, which led to the identification of four Aboriginal Places. Both sites of high archaeological significance (high density artefact scatters) were located within 200m of Merri Creek.
Tucker in prep.	Growth Areas Authority Donnybrook PSP to the west of the Activity Area	Desktop assessment and surface survey of land within Woodstock PSP, immediately to the east of the current study area. The survey identified one new Aboriginal stone artefact site and four scarred trees. The Activity Area included part of Darebin and The landform is grassland which inhibited ground surface visibility. Stony rises are prevalent and were identified as sensitive and subsurface testing was recommend as part of the preparation of future CHMPs.

Table 4: Report Summaries

Tulloch 1995

Tulloch carried out an archaeological survey for Boral, covering an area which included parts of the north of the current Activity Area. Fieldwork consisted of targeted survey in areas that had not previously been surveyed by Ellender (1995) or du Cros (1992). Ground surface visibility was generally poor due to heavy vegetation cover. One new Aboriginal archaeological site (an isolated artefact, VAHR 822-0783) and seven new historical archaeological sites were identified during the survey. Six of the historical sites were dry stone walls, while the seventh was interpreted as being a stock enclosure. Five of these (H7822-0192 to 0196) are located east of the railway line, within the current Activity Area. Management recommendations included retaining intact sections of stone wall and maintaining a 100m buffer around known Aboriginal sites.

Feldman, Howell-Meurs and Mathews 2007

In 2007, Feldman, Howell-Meurs and Matthews prepared a CHMP for 'Passing Lane 2; Donnybrook' of the Melbourne-Sydney Passing Lanes Project for South Improvement Alliance. The study area comprised the extent of the proposed passing lane within the rail reserve between Donnybrook and Beveridge and includes the western boundary of the current Activity Area. The investigation identified ten Aboriginal Cultural Heritage Places comprising isolated artefact and artefact scatters (VAHR 7822-1179, 1175, 0873, 1174, 1173, 2217, 2218, 7823-0189, 0076 and 0075). The majority of Places were concentrated within one kilometre of Merri Creek. Six of these were previously registered (AAV 7822-1175, 0783,

1174, 1173, 7823-0076 and 0075) and occurred in a highly disturbed context. One dense artefact scatter (VAHR 7823-0189) was located on the slope of a stony rise, endorsing the authors' view that stony rises can influence site distribution pattern in the broader area. No stratified deposits were present within the Activity Area. The authors assessed the archaeological significance of the sites to be generally low and concluded that they were representative of a low density 'background' artifact scatter occurring broadly across Central Victoria. The proposed activity would harm all sites except for VAHR 7822-1179.

Turnbull 2009

Turnbull prepared a desktop cultural heritage assessment to determine the cultural heritage values for the E6 transport corridor, part of which forms the northern boundary to the current Activity Area. Desktop assessment identified 57 registered Aboriginal places within this corridor. Site types included surface and sub-surface artefact scatters, scarred trees and earth features. A broad predictive model was put forward which suggested that the Creek corridors had high potential to contain Aboriginal Places while the remainder of the study area had low-moderate potential. Twenty-two registered historical places and twenty known (but unregistered) historical places were identified within the corridor. The highest concentration of such places was in the vicinity of Wollert, south of the current Activity Area. Site types reflected the early settlement and associated land use practices dating from the mid-1800s. No known areas of cultural heritage sensitivity were known from within the study area. It was suggested that the E6 corridor had the potential to include stone walls, stone dairy structures and enclosures, domestic dwellings, historical artefacts scatters, archaeological deposits, and small quarries within its boundaries.

Webb, Orr and Walker 2011

Webb, Orr and Walker undertook a Cultural Heritage Assessment of a 470 ha area fronting Donnybrook Road to assist in the preparation of a concept masterplan for future development. The area they assessed forms part of the current assessment area. A desktop review of the archaeology and heritage of the land was carried out, as was a brief inspection of the subject land from the adjacent public road reserve. The authors noted that there had been no previous archaeological fieldwork assessment over much of the Activity Area; exceptions to this being along Merri Creek on the northern boundary and the railway line along the west. Therefore, it was concluded that the lack of recorded sites from within the Activity Area should not be taken to indicate their absence. The authors noted that archaeological record of the geographic region generally consists of a large number of isolated artefacts and medium to low density artefact scatters, with scarred trees also being present. The Merri Creek corridor is particularly sensitive for Aboriginal stone artefacts, especially in the northern reaches that have been subject to relatively minor disturbance since European occupation. In addition to Aboriginal Cultural Heritage, Webb, Orr and Walker identified a number of known historical places within the surrounding geographic region as well as three dry stone walls within the subject land.

5.3.2 Aboriginal places within 10km of the Activity Area

Aboriginal Affairs Victoria (AAV) maintains a register (Victorian Aboriginal Heritage Register) of all recorded Aboriginal archaeological sites and a library of all published and unpublished reports describing investigations of Aboriginal archaeological sites in Victoria. The AAV register was accessed electronically on 19 February 2013 and a map generated showing the location and type of registered Aboriginal Places. Site cards for Places within or close to the Activity Area were copied and checked against the relevant report and maps contained therein. A separate register contains details of Aboriginal historic places and this was also consulted.

A search of the Register showed that there are twelve registered Aboriginal Cultural Heritage Places within the subject land (Table 2). These consist of seven artefact scatters and five scarred trees. One of the artefact scatters was identified exposed in the river bank of Malcolm Creek and is indicated on ACHRIS as an earth feature. The five scarred trees were recorded during the early 1990s (Ellender 1995) and are indicated as “probable Aboriginal” scars on the relevant site cards. Three of the sites on the western boundary of the current Activity Area (VAHR7822-1173 to 1175) have been issued with Consents to Disturb and subject to a previous monitoring program.

It is worth noting also that there is an early reference to a site indicated as a mound on ACHRIS mapping (VAHR 7822-0008). There is little information about this site other than reference to it in Smyth 1878, Mitchell 1949 and Massola 1966. An approximate location of “Merri Creek at Donnybrook is given”. The place location on ACHRIS is indicative only but it is most likely on creek bank, west of the current Activity Area.

VAHR No	Name	Component Type	Easting (GDA94)	Northing (GDA94)
7822-0708	ALEXANDER'S TREE	Scarred Tree	321993	5846359
7822-0709	BALD HILL 1	Scarred Tree	322352	5845982
7822-0710	BALD HILL 2	Earth Feature	322512	5845981
7822-0711	BALD HILL 3	Scarred Tree	323137	5846845
7822-0712	BALD HILL 4	Scarred Tree	323250	5846826
7822-0713	BALD HILL 5	Scarred Tree	323072	5846795
7822-0783	DONNYBROOK QUARRY VIII	Artefact Scatter	321700	5846524
7822-1173	DONOVANS L RAIL RES.1	Artefact Scatter	321774	5846776
7822-1174	DONOVANS L RAIL RES.2	Artefact Scatter	321724	5846633
7822-1175	DONOVANS L RAIL RES.3	Artefact Scatter	321562	5846004
7822-1179	DONNYBROOK RD RAIL RES.1	Artefact Scatter	320912	5843584
7822-2217	MELBOURNE SYDNEY PASSING LANE 2-1	Artefact Scatter	321494	5845726

Table 5: Registered Aboriginal cultural heritage places within the subject land.

A total of 290 Registered Aboriginal Places are located within a 10km radius of the Activity Area. These are represented by 312 components due to some Places containing more than one component. This is summarised below in Table 3 below.

VAHR No	Name	Component Type	Easting (GDA94)	Northing (GDA94)
7822-0008	MERRI CK DONNYBROOK	Earth Feature	320112	5843184
7822-0025	LOGIE	Scarred Tree	315412	5841384
7822-0170	CRAGIEBURN RD 1	Artefact Scatter	319318	5836263
7822-0171	CRAGIEBURN RD 2	Artefact Scatter	318750	5835754
7822-0172	CRAGIEBURN RD 3	Artefact Scatter	318740	5835721
7822-0325	SILVERTON 4	Artefact Scatter	315825	5839845
7822-0325	SILVERTON 4	Earth Feature	315825	5839845
7822-0656	SUMMERHILL 1	Scarred Tree	320112	5839439
7822-0708	ALEXANDER'S TREE	Scarred Tree	321993	5846359
7822-0709	BALD HILL 1	Scarred Tree	322352	5845982
7822-0710	BALD HILL 2	Earth Feature	322512	5845981
7822-0711	BALD HILL 3	Scarred Tree	323137	5846845
7822-0712	BALD HILL 4	Scarred Tree	323250	5846826
7822-0713	BALD HILL 5	Scarred Tree	323072	5846795
7822-0714	TERRICK TREE	Scarred Tree	319423	5836570
7822-0715	RICK 1	Scarred Tree	320220	5840343
7822-0716	RICK 2	Scarred Tree	320205	5840904
7822-0718	BRIGGS 1	Earth Feature	319487	5837163
7822-0719	BRIGGS 2	Scarred Tree	319797	5837505
7822-0720	BRIGGS 3	Artefact Scatter	319667	5838049
7822-0720	BRIGGS 3	Earth Feature	319667	5838049
7822-0721	BRIGGS 4	Earth Feature	319725	5838222
7822-0722	JACKHAMMER 1	Artefact Scatter	320158	5841282
7822-0723	BURGESS 1	Earth Feature	321344	5846244
7822-0724	BURGESS 2	Scarred Tree	321279	5846224
7822-0725	BURGESS 3	Scarred Tree	321069	5845978
7822-0726	CRAIGIEBURN RD 6	Artefact Scatter	319276	5836594
7822-0727	SUMMERHILL 2	Earth Feature	320337	5839545
7822-0728	SUMMERHILL 3	Artefact Scatter	320326	5839722
7822-0728	SUMMERHILL 3	Earth Feature	320326	5839722
7822-0729	SUMMERHILL 4	Artefact Scatter	320172	5839725
7822-0730	SUMMERHILL 5	Artefact Scatter	320083	5838998
7822-0741	BULLOCK CROSSING	Artefact Scatter	320243	5840785
7822-0741	BULLOCK CROSSING	Earth Feature	320243	5840785
7822-0783	DONNYBROOK QUARRY VIII	Artefact Scatter	321700	5846524
7822-0932	CRAIGIEBURN 1	Artefact Scatter	320544	5835207
7822-0933	CRAIGIEBURN 2	Artefact Scatter	320517	5835276
7822-0943	CONFLUENCE 1	Artefact Scatter	319312	5836764
7822-0944	CONFLUENCE 2	Artefact Scatter	319387	5836684
7822-0946	MT RIDLEY 1	Scarred Tree	318827	5837917
7822-0959	PIONEER 1	Artefact Scatter	321662	5837609
7822-0960	SUMMERHILL 1	Artefact Scatter	320126	5840184
7822-1080	PITMAN 1	Artefact Scatter	317083	5838093
7822-1106	CRAIGIEBURN AMPHITHEATRE IA 1	Artefact Scatter	317088	5838148
7822-1114	CRAIGIEBURN WETLAND IA 1	Artefact Scatter	316712	5838134
7822-1137	HUME 1	Artefact Scatter	321374	5836867
7822-1165	HUME 2	Artefact Scatter	321287	5837059
7822-1166	HUME 3	Artefact Scatter	321172	5837432
7822-1173	DONOVANS L RAIL RES.1	Artefact Scatter	321774	5846776

7822-1174	DONOVANS L RAIL RES.2	Artefact Scatter	321724	5846633
7822-1175	DONOVANS L RAIL RES.3	Artefact Scatter	321562	5846004
7822-1176	CRAIGIEBURN RAIL RES.	Artefact Scatter	319073	5838247
7822-1177	SUMMERHILL RD RAIL RES.1	Artefact Scatter	319841	5840652
7822-1178	SUMMERHILL RD RAIL RES.2	Artefact Scatter	319338	5839108
7822-1179	DONNYBROOK RD RAIL RES.1	Artefact Scatter	320912	5843584
7822-1267	JENKIN 2	Artefact Scatter	322759	5835581
7822-1391	CRAIGIEBURN BYPASS 2	Artefact Scatter	319344	5837131
7822-1392	CRAIGIEBURN BYPASS 3	Artefact Scatter	319051	5837707
7822-1435	HARVEST HOME NORTH 1	Artefact Scatter	322151	5835434
7822-1437	HARVEST HOME NORTH SCATTER 1	Artefact Scatter	322093	5835522
7822-1438	CURLY SEDGE CREEK 1	Artefact Scatter	320357	5836285
7822-1440	DONNYBROOK IA 1	Artefact Scatter	322919	5841731
7822-1441	DONNYBROOK IA 2	Artefact Scatter	323011	5841812
7822-1443	NUBRIK 1	Artefact Scatter	319342	5836844
7822-1472	NUBRIK 2	Artefact Scatter	319371	5836965
7822-1473	CRAIGIEBURN BYPASS 4	Artefact Scatter	319198	5837031
7822-1497	URLC SAS 1	Artefact Scatter	321312	5835214
7822-1498	URLC SAS 2	Artefact Scatter	321312	5835214
7822-1499	URLC ST 1	Scarred Tree	321824	5834853
7822-1500	URLC ST 2	Scarred Tree	321177	5834995
7822-1552	CRAIGIEBURN RAIL IA 1	Artefact Scatter	319985	5841340
7822-1554	CURLY SEDGE CREEK 2	Artefact Scatter	321353	5836165
7822-1555	CURLY SEDGE CREEK 3	Artefact Scatter	321434	5836100
7822-1573	CRAIGIEBURN BYPASS 5	Artefact Scatter	319023	5837258
7822-1574	CRAIGIEBURN BYPASS 6	Artefact Scatter	318895	5837671
7822-1647	NOTO 1	Artefact Scatter	319063	5836613
7822-1761	MALCOLM CREEK BANK IA 1	Artefact Scatter	318665	5837216
7822-1762	MALCOLM CREEK BANK IA 2	Artefact Scatter	318658	5837139
7822-1854	DOHERTYS SCARRED TREE	Scarred Tree	323437	5836056
7822-1905	COOINDA COLLECTION	Object Collection	314222	5847314
7822-2024	LOCKERBIE AS 2	Artefact Scatter	321368	5846219
7822-2025	LOCKERBIE AS 3	Artefact Scatter	321072	5845763
7822-2026	LOCKERBIE AS 4	Artefact Scatter	321062	5845152
7822-2027	LOCKERBIE 1A 9	Artefact Scatter	319857	5846433
7822-2028	LOCKERBIE 1A 10	Artefact Scatter	319582	5845426
7822-2063	HUME FREEWAY KALKALLO 1	Artefact Scatter	318930	5846555
7822-2064	HUME FREEWAY KALKALLO 2	Artefact Scatter	318856	5845585
7822-2065	HUME FREEWAY KALKALLO 3	Artefact Scatter	318790	5845130
7822-2066	HUME FREEWAY KALKALLO 6	Artefact Scatter	318630	5845163
7822-2135	KALKALLO PARK 1	Artefact Scatter	318416	5844670
7822-2136	KALKALLO PARK 2	Artefact Scatter	316373	5844266
7822-2137	KALKALLO PARK 3	Artefact Scatter	315693	5844388
7822-2138	KALKALLO PARK 4	Artefact Scatter	316015	5844355
7822-2139	KALKALLO PARK 5	Artefact Scatter	315081	5844649
7822-2169	MERRIFIELD 1	Artefact Scatter	317511	5843375
7822-2170	MERRIFIELD 2	Artefact Scatter	317670	5844410
7822-2171	MERRIFIELD 3	Artefact Scatter	317780	5844592
7822-2201	MT RIDLEY ROAD 1	Artefact Scatter	316900	5839830
7822-2202	MT RIDLEY ROAD 2	Artefact Scatter	316599	5840050

7822-2217	MELBOURNE SYDNEY PASSING LANE 2-1	Artefact Scatter	321494	5845726
7822-2218	MELBOURNE SYDNEY PASSING LANE 2-2	Artefact Scatter	321882	5847177
7822-2236	DONNYBROOK 1	Scarred Tree	315718	5842473
7822-2242	M/CREEK 1	Artefact Scatter	315900	5840084
7822-2243	M/CREEK 2	Artefact Scatter	315901	5838981
7822-2244	M/CREEK 3	Artefact Scatter	315817	5839440
7822-2245	M/CREEK4	Artefact Scatter	315994	5839453
7822-2246	M/CREEK 5	Artefact Scatter	315575	5840141
7822-2259	MT RIDLEY RESERVE 1	Artefact Scatter	317379	5839921
7822-2267	MERRIFIELD 4	Artefact Scatter	315393	5844239
7822-2268	MERRIFIELD 5	Artefact Scatter	315034	5846455
7822-2269	MERRIFIELD 6	Artefact Scatter	315248	5846527
7822-2276	MALCOLM CREEK SEWER 1	Artefact Scatter	318367	5837912
7822-2276	MALCOLM CREEK SEWER 1	Object Collection	318367	5837912
7822-2277	MALCOLM CREEK 6	Scarred Tree	315929	5838847
7822-2278	MALCOLM CREEK 7	Scarred Tree	315965	5838869
7822-2281	M/CREEK 8	Artefact Scatter	315802	5839640
7822-2281	M/CREEK 8	Object Collection	315802	5839640
7822-2281	M/CREEK 8	Object Collection	315802	5839640
7822-2282	MERRIFIELD 1 NORTH	Artefact Scatter	317513	5843385
7822-2294	CRAIGIEBURN RD 1	Artefact Scatter	322966	5835965
7822-2295	CRAIGIEBURN RD 2	Scarred Tree	322984	5835643
7822-2298	MALCOLM CREEK 9	Artefact Scatter	315761	5838529
7822-2339	MALCOLM CREEK 1	Artefact Scatter	318503	5837426
7822-2339	MALCOLM CREEK 1	Object Collection	318491	5837436
7822-2340	MALCOLM CREEK 2	Artefact Scatter	318494	5837337
7822-2340	MALCOLM CREEK 2	Object Collection	318491	5837436
7822-2341	MALCOLM CREEK 3	Artefact Scatter	318458	5837406
7822-2341	MALCOLM CREEK 3	Object Collection	318491	5837436
7822-2342	MALCOLM CREEK 4	Artefact Scatter	318398	5837396
7822-2342	MALCOLM CREEK 4	Object Collection	318491	5837436
7822-2366	JENKINS SAS 4	Artefact Scatter	322838	5835665
7822-2381	JENKINS SAS 3	Artefact Scatter	322755	5835711
7822-2382	McKAY IA 1	Artefact Scatter	322463	5836000
7822-2696	Centre Break 1	Artefact Scatter	319477	5835796
7822-2860	Malcolm Creek 10	Artefact Scatter	315488	5839554
7822-2861	Aitken Creek Tributary 5	Artefact Scatter	314779	5839487
7822-2934	45 Donnybrook Road IA 1	Artefact Scatter	318017	5842488
7822-3345	Wollert 5 IA	Artefact Scatter	323054	5836201
7822-3378	Tamboore 2 IA	Artefact Scatter	315122	5845249
7822-3379	Tamboore 3	Artefact Scatter	314775	5845163
7822-3380	Tamboore 9	Artefact Scatter	314378	5844409
7822-3381	Tamboore 4	Artefact Scatter	314965	5845072
7822-3382	Tamboore 5	Artefact Scatter	314527	5844996
7822-3383	Tamboore 11 IA	Artefact Scatter	314207	5844127
7822-3384	Tamboore 12 IA	Artefact Scatter	314426	5844167
7822-3385	Tamboore 13 IA	Artefact Scatter	314396	5843942
7822-3386	Tamboore 16 IA	Artefact Scatter	313932	5842631
7822-3387	Tamboore 17 IA	Artefact Scatter	313784.17	5842403
7822-3388	Tamboore 18 IA	Artefact Scatter	313749.3	5842453.5
7822-3390	Tamboore 15 IA	Artefact Scatter	313977	5843694
7822-3391	Tamboore 7	Artefact Scatter	314359	5844629
7822-3392	Tamboore 8	Artefact Scatter	314389	5844486

7822-3393	Tamboore 10	Artefact Scatter	314355	5844227
7822-3394	Tamboore 6	Artefact Scatter	314274	5844809
7822-3395	Tamboore 23	Scarred Tree	314481.33	5842237
7822-3396	Tamboore 24	Artefact Scatter	314670	5845542
7822-3406	Tamboore 1	Artefact Scatter	314732	5845243
7822-3407	Tamboore 14	Artefact Scatter	314074.12	5843554.2
7822-3409	Tamboore 21	Scarred Tree	315309	5842897
7822-3410	Craigieburn Toe-Hold Tree	Scarred Tree	322956	5835630
7822-3482	Craigieburn Stone Feature	Stone Feature	323009.12	5836015.4
7822-3483	Craigieburn Road East 1	Artefact Scatter	322894	5835748
7822-3483	Craigieburn Road East 1	Stone Feature	322875	5835722
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315537	5840282
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	315450	5840297
7822-3518	Mt Ridley Road 3	Low Density Artefact Distribution	316100	5840213
7823-0075	MINTON RD RAIL RES.1 IA	Artefact Scatter	322675	5850154
7823-0076	MINTON RD RAIL RES.2 IA	Artefact Scatter	322666	5850074
7823-0077	MINTON RD RAIL RES.3	Artefact Scatter	322718	5850334
7823-0101	LEWIS 1	Scarred Tree	318981	5851669
7823-0119	BEVERIDGE 1	Artefact Scatter	322276	5850659
7823-0151	LOCKERBIE AS 1	Artefact Scatter	321149	5849307
7823-0152	LOCKERBIE 1A 1	Artefact Scatter	320653	5849293
7823-0153	LOCKERBIE 1A 2	Artefact Scatter	320985	5849341
7823-0154	LOCKERBIE 1A 3	Artefact Scatter	320897	5849210
7823-0155	LOCKERBIE 1A 4	Artefact Scatter	321510	5849207
7823-0156	LOCKERBIE 1A 5	Artefact Scatter	321753	5849035
7823-0157	LOCKERBIE 1A 6	Artefact Scatter	321297	5848913
7823-0158	LOCKERBIE 1A 7	Artefact Scatter	321159	5848290
7823-0159	LOCKERBIE 1A 8	Artefact Scatter	320811	5848118
7823-0161	HUME FREEWAY KALKALLO 4	Artefact Scatter	319830	5849005
7823-0162	HUME FREEWAY KALKALLO 5	Artefact Scatter	319960	5849250
7823-0164	MANDALAY 1	Artefact Scatter	317969	5850892
7823-0165	MANDALAY 2	Artefact Scatter	318106	5850429
7823-0171	MANDALAY 4	Artefact Scatter	318818	5851262
7823-0181	MANDALAY 3	Artefact Scatter	319179	5851086
7823-0189	MELBOURNE SYDNEY PASSING LANE 2-3	Artefact Scatter	322554	5849432
7823-0190	MANDALAY 5	Artefact Scatter	318177	5850519
7823-0217	Stewart Street East 1	Artefact Scatter	322523.74	5850929.4
7823-0218	Stewart Street East 2	Artefact Scatter	322551.73	5850792.9
7823-0219	Stewart Street East 3	Artefact Scatter	322643.41	5850655.4
7823-0220	Stewart Street East 4	Artefact Scatter	322116.24	5850815.8
7823-0221	Stewart Street East 5	Artefact Scatter	322070.4	5850666.9
7823-0222	Stewart Street East 6	Artefact Scatter	322058.93	5850563.8
7823-0223	Stewart Street East 7	Artefact Scatter	322274	5850434
7823-0223	Stewart Street East 7	Object Collection	322288.14	5850437.8

7823-0224	Stewart Street East 8	Artefact Scatter	322425.67	5850540.9
7823-0225	Stewart Street East 9	Artefact Scatter	321887.04	5850346.2
7823-0226	Stewart Street East 10	Artefact Scatter	322001.64	5850162.9
7823-0227	Stewart Street East 11	Artefact Scatter	322368.37	5850094.1
7823-0228	Stewart Street East 12	Artefact Scatter	322609.03	5850094.1
7823-0229	Stewart Street East 13	Artefact Scatter	321760.99	5849590.1
7823-0230	Stewart Street East 14	Artefact Scatter	322242.31	5849716.1
7823-0231	Stewart Street East 15	Artefact Scatter	322299.61	5849555.7
7823-0232	Stewart Street East 16	Artefact Scatter	322265.23	5849418.3
7823-0233	Stewart Street East 17	Artefact Scatter	322505.89	5849429.7
7823-0235	Camerons Lane 1	Artefact Scatter	319725.11	5851244
7922-0035	GILGHI PARK 1	Scarred Tree	329012	5841984
7922-0036	GILGHI PARK 2	Scarred Tree	329062	5841984
7922-0136	FENWICK PARK 5	Scarred Tree	329912	5841084
7922-0138	BUNG BONG 1	Scarred Tree	330512	5842584
7922-0139	BUNG BONG 2	Artefact Scatter	330312	5842584
7922-0140	BUNG BONG 3	Scarred Tree	329992	5843124
7922-0141	BUNG BONG 4	Scarred Tree	329952	5842914
7922-0142	DONNYBROOK ROAD 1	Artefact Scatter	330712	5841284
7922-0143	DONNYBROOK ROAD 2	Artefact Scatter	331062	5841414
7922-0151	GLEN AVON 1	Scarred Tree	329812	5843784
7922-0152	GLEN AVON 2	Aboriginal Human Remains (Burial)	329612	5843684
7922-0152	GLEN AVON 2	Stone Feature	329612	5843684
7922-0155	BRIDGE INN ROAD 1	Artefact Scatter	329212	5837234
7922-0156	BRIDGE INN ROAD 2	Artefact Scatter	329787	5838259
7922-0157	BRIDGE INN ROAD 3	Artefact Scatter	329637	5837659
7922-0176	FENWICK PARK 4	Artefact Scatter	330412	5841784
7922-0181	FENWICK PARK 1	Artefact Scatter	329912	5840684
7922-0182	FENWICK PARK 2	Scarred Tree	330512	5840284
7922-0183	FENWICK PARK 3	Scarred Tree	330312	5840284
7922-0184	FENWICK PARK 6	Scarred Tree	330412	5840584
7922-0365	DAREBIN 14	Earth Feature	328332	5837615
7922-0366	DAREBIN 15	Earth Feature	328234	5836369
7922-0367	DAREBIN 16	Scarred Tree	327931	5835738
7922-0368	DAREBIN 17	Earth Feature	328069	5835758
7922-0369	DAREBIN 18	Earth Feature	328104	5835810
7922-0374	DAREBIN 23	Earth Feature	328188	5835886
7922-0648	DONNYBROOK RD 4	Artefact Scatter	331099	5841481
7922-0649	DONNYBROOK RD 3	Scarred Tree	330978	5840538
7922-0650	DONNYBROOK RD 2	Scarred Tree	330930	5840516
7922-0666	WALLAN RD 1	Artefact Scatter	332959	5847453
7922-0684	MANDIE 1	Artefact Scatter	324132	5835605
7922-0685	MANDIE 2	Artefact Scatter	324392	5835554
7922-0755	BARBERS CREEK SCAR TREE 1	Scarred Tree	331029	5846118
7922-0756	BARBERS CREEK IA 1	Artefact Scatter	331583	5846596
7922-0757	BARBERS CREEK IA 2	Artefact Scatter	331577	5846351
7922-0758	BARBERS CREEK IA 3	Artefact Scatter	330947	5846582
7922-0759	GRANTS RD PROPERTY IA4	Artefact Scatter	330892	5845890
7922-0760	BARBERS CREEK AS 1	Artefact Scatter	331851	5845683
7922-0761	BARBERS CREEK AS 2	Artefact Scatter	331791	5845622
7922-0762	BARBERS CREEK AS 3	Artefact Scatter	331792	5845499
7922-0763	BARBERS CREEK AS 4	Artefact Scatter	331601	5846484
7922-0764	BARBERS CREEK AS 5	Artefact Scatter	331592	5846409

7922-0772	LUPPINO SAS 1	Artefact Scatter	323791	5835849
7922-0773	SCAFFIDI SAS 1	Artefact Scatter	323888	5835189
7922-0791	EPPING NORTH 2	Artefact Scatter	325147	5835187
7922-0792	EPPING NORTH 3	Artefact Scatter	325084	5835654
7922-0793	EPPING NORTH 4	Artefact Scatter	325816	5835472
7922-0798	EPPING NORTH 9	Scarred Tree	326305	5835258
7922-0807	EPPING NORTH 11	Artefact Scatter	325024	5834999
7922-0808	EPPING NORTH 12	Artefact Scatter	324787	5835607
7922-0809	EPPING NORTH 13	Artefact Scatter	324841	5835222
7922-0815	135 EPPING NORTH	Artefact Scatter	325246	5835397
7922-0816	BC IA 1	Artefact Scatter	331855	5845311
7922-0817	BC IA 2	Artefact Scatter	331701	5846141
7922-0818	BC IA 3	Artefact Scatter	331804	5845973
7922-0819	BC IA 4	Artefact Scatter	331827	5845022
7922-0839	BRIDGEWATER 1	Artefact Scatter	326032	5834997
7922-0840	BRIDGEWATER 2	Artefact Scatter	325897	5835162
7922-0841	BRIDGEWATER 3	Artefact Scatter	325662	5835173
7922-0887	GARNER 1	Artefact Scatter	329005	5843682
7922-0888	GARNER 2	Artefact Scatter	328733	5843768
7922-0889	GARNER 3	Artefact Scatter	328655	5843880
7922-0890	GRANTS ROAD SOUTH 1	Artefact Scatter	326954	5845491
7922-0891	GRANTS ROAD NORTH 1	Artefact Scatter	326778	5845599
7922-0892	GRANTS ROAD NORTH 2	Artefact Scatter	326650	5845777
7922-0893	GRANTS ROAD NORTH 3	Artefact Scatter	326493	5846011
7922-0894	GRANTS ROAD NORTH 4	Artefact Scatter	326549	5846220
7922-0895	JANNA 2	Artefact Scatter	326918	5847995
7922-0896	JANNA 3	Artefact Scatter	326803	5847769
7922-0897	JANNA 4	Artefact Scatter	326694	5847584
7922-0898	TALWOOD PARK 1	Artefact Scatter	327863	5844413
7922-0978	ELIZABETH PLACE 1	Artefact Scatter	326815	5846375
7922-1130	MANDIE 3 SAS	Artefact Scatter	324001	5834988
7922-1142	SCAFFIDI 2 SAS	Artefact Scatter	323597	5834747
7922-1143	MANDIE IA 4	Artefact Scatter	323987	5834852
7922-1150	SUMMERHILL 2	Artefact Scatter	325024	5835476
7922-1175	SUMMERHILL 4	Stone Feature	324688	5835263
7922-1176	SUMMERHILL 1	Stone Feature	324877	5835376
7922-1177	SUMMERHILL 3	Artefact Scatter	324847	5835163
7922-1179	SUMMERHILL 5b	Stone Feature	324750	5835229
7922-1243	HH Road Eden Gardens 1	Artefact Scatter	324618.74	5834990.7
7922-1244	HH Road Eden Gardens 2	Artefact Scatter	324614.11	5835024.2
7922-1253	Boundary Road Toe Hold Tree	Scarred Tree	325491	5836730
7922-1268	Wollert 1 IA	Artefact Scatter	325031	5836770
7922-1269	Wollert 4 IA	Artefact Scatter	325098	5837408
7922-1270	Wollert 8 IA	Artefact Scatter	325287	5836409
7922-1271	Wollert 9	Artefact Scatter	325301	5836673
7922-1272	Wollert 14	Artefact Scatter	326739	5836915
7922-1273	Wollert 3	Artefact Scatter	325047	5836516
7922-1278	Wollert 10	Artefact Scatter	325192	5835917
7922-1279	Wollert 13	Artefact Scatter	325633	5835976
7922-1280	Wollert 17	Artefact Scatter	326653	5836955
7922-1286	Wollert 7	Artefact Scatter	325131	5836322
7922-1287	Wollert 11	Artefact Scatter	325606	5836141
7922-1288	Wollert 12	Artefact Scatter	325581	5836017
7922-1289	Wollert 16	Artefact Scatter	326508	5837054

7922-1290	Wollert 6	Scarred Tree	325201	5836137
7923-0111	BEVERIDGE COLLECTION	Object Collection	325012	5849984
7923-0153	JANNA 1	Artefact Scatter	326996	5848306

Table 6: Registered Aboriginal cultural heritage places within 10km of the subject land.

Of the 312 components that have been recorded from within 10km of the Activity Area, by far the most common are Artefact Scatters, which, when taken with Low Density Artefact Distributions, make up over three quarters of all components (76.3%). Some of the Earth Features consist of in situ artefacts exposed in soil deposits, which would further increase the number of stone artefact sites. Scarred Trees are the second most represented site type, with 42 (13.5%) having been identified. These were very often found in close proximity to watercourses such as Merri Creek. Despite the apparent high numbers, many of these are unlikely to meet the current criteria for registration on the VAHR, having been recorded as probable Scarred Trees rather than with the higher level of certainty that is currently required. Other site types which have been found include Stone features (1.9%) such as cairns, object collections (3.2%) consisting of reburied artefacts from assessments as well as collected artefacts, and a single possible Aboriginal burial.

Component Type	No.	Percent (%)
Aboriginal Human Remains (Burial)	1	0.3
Artefact Scatter	229	73.4
Earth Feature	15	4.8
Low Density Artefact Distribution	9	2.9
Object Collection	10	3.2
Scarred Tree	42	13.5
Stone Feature	6	1.9
Total	312	100.0%

Table 7: Numbers of Aboriginal site types within 10km of the subject land.

5.4 Conclusions and Site Prediction Model

5.4.1 Conclusion

A review of the AAV register (Table 1) has revealed there are twelve known Aboriginal Places within the current Activity Area. These consist of seven artefact scatters and five probable scarred trees.

Although no Aboriginal Places listed have previously been recorded over large parts of the Activity Area, this should not be viewed as an absence of sites as much of the area has not been subject to previous investigation. The sensitivity of the Activity Area is dependent upon the landforms that may be present and their present condition. Within the Activity Area, the Merri Creek corridor has been shown to contain both scarred trees and artefact scatters. These were recorded in the early 1990s (Tulloch 1995) and there is the potential for additional material to be exposed/visible due to changes in ground conditions since that time. Merri Creek has been proven to be archaeologically sensitive and it is likely that this sensitivity extends to minor watercourses/tributaries and associated wetlands. Stony rises, hills or elevations are also likely to be sensitive, particularly in the vicinity of potable water sources. Mature native trees may also have evidence of cultural scarring and must be considered as potentially sensitive. In contrast, it is usual to assess the open flat basalt plains landscapes as having low cultural heritage sensitivity as the site types that are usually present are random isolated or low density artefact distributions /scatters. It is likely that this site type is also present in the Activity Area, although not always archaeologically visible. Although unlikely, it remains possible that other site types such as earth and stone features or human remains may be present.

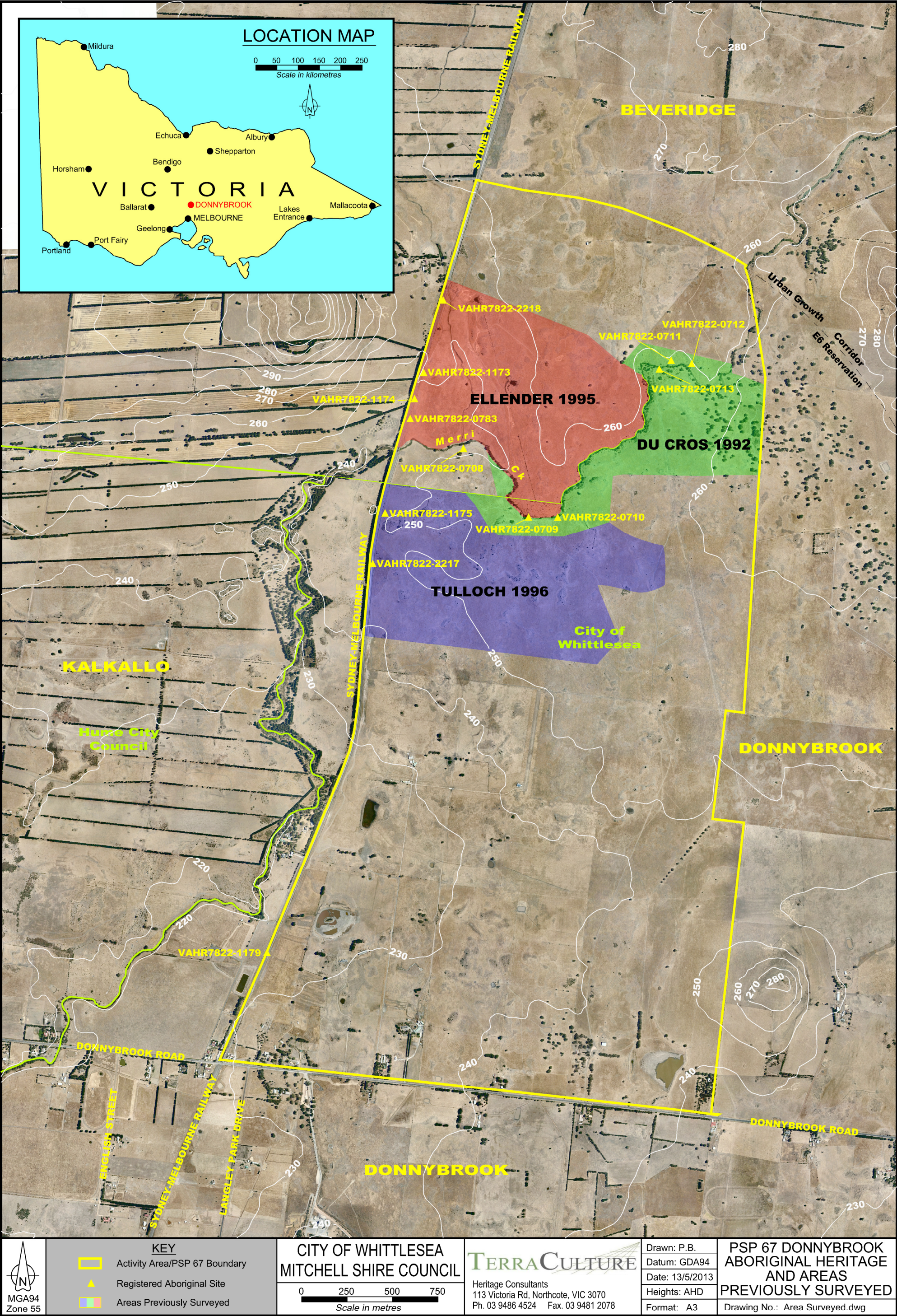
European settlement has caused ground disturbance in the Donnybrook area due to the clearance of native vegetation and stone during the preparation of ground for farming. These modifications to the landscape are likely to have had some impact on the ground integrity, vegetation, hydrology and wider environment of the subject land; therefore affecting the context, and to a lesser extent, the survival of Aboriginal cultural material.

Much of the Activity Area has not been subject to prior archaeological survey and it is likely that more Aboriginal archaeological remains will be located during any future investigation. Such sites are likely to occur in proximity to Merri Creek and other waterways and wetlands, and stony rises or other elevated areas.

5.4.2 Site Prediction Model

A review of the AAV register has revealed there are twelve known Aboriginal Places within the current Activity Area. These consist of seven artefact scatters and five probable scarred trees (see Table 3). Additional stone artefacts and scarred trees are the most likely types of Aboriginal Cultural heritage to be present, particularly where ground disturbance since European arrival has been less intensive. Other site types which may be present include earth and stone features as well as human remains; however based on their low numbers in the region, the likelihood of unrecorded examples of such sites being present is very low. In summary the assessment concludes;

-
- Additional culturally scarred trees and stone artefact sites are likely to be identified;
 - Additional low density stone artefacts are likely to be identified in association with all landforms in the survey area;
 - Artefact scatters are most likely to be present within 200 metres of Merri Creek and/or on stony rises
 - Artefact scatters are also likely to be present within 50 metres of tributaries of Merri Creek and wetlands; and
 - Owing to the land use practices since European settlement, significant ground disturbance (as defined under the *Aboriginal Heritage Regulations* 2007) is not expected, except in specific instances that might be determined through ground surface survey, e.g. where basalt mining by machine has taken place.



MAP 3: Showing Areas Previously Surveyed (based on Tulloch 1996) and Previously Registered Aboriginal and Heritage Sites.

5.5 Standard Assessment Methodology

The pedestrian survey involved a visual inspection of the Activity Area to determine the likelihood for Aboriginal archaeological material to exist on these landforms as well as to assess the effects of existing site conditions and past activities that may have affected the integrity of any deposits.

Each property was initially accessed by 4wd vehicle using an access point arranged with the landowner. Pedestrian survey was then carried out. This involved a team of four people spaced at 5m intervals, walking overlapping transects to achieve full coverage of each survey area, insofar as was possible to do so. Areas that were not surveyed in this manner include the immediate surroundings of farm buildings and residential buildings as these are assumed to be highly disturbed.

An exception to full pedestrian survey was property 43. At this property, the level plain was largely covered in high grass. This inhibited pedestrian access and vehicle access was confined to slashed tracks in order to alleviate landowner concerns about potential vehicle-initiated grass fires. Therefore, landform assessment from the vehicle and a targeted pedestrian survey, focusing on the stony rises was carried out at this location.

The following information was collected during the survey:

- information regarding surface exposure and ground surface visibility;
- notes and photographs were taken in order to illustrate prior ground disturbance, as well as changes in aspect or landform; and
- the presence of Aboriginal Places, their contents, DGPS location (in MGA 94) and extent. Site cards were filled out in relation to new Aboriginal Places. Site inspection forms were filled out in relation to previously recorded Aboriginal Places. Both types of form were submitted to the Victorian Aboriginal Heritage Registry.

Ground surface visibility was defined as follows:

- Excellent Visibility 90-100%
- Good 50-90%
- Poor 30-50%
- Very Poor 0-30%

Ground surface visibility is influenced by many factors including the presence of long grass, cropping, land use activity, recent rainfall and animals. These factors may obscure or reveal Aboriginal Cultural Heritage (especially stone artefacts).

The following table provides the details of the allotments within the Activity Area and the type of survey carried out.

PSP Property No.	Site Visit Status	Survey Type
31	No survey required	-
32	Access Granted	Pedestrian
33	Access Granted	Pedestrian
34	Unable to contact owner	-
35	Access denied	-
36	Access Granted	Pedestrian
37	Access Granted	Pedestrian
38	Access Granted	Pedestrian
39	Access Granted	Pedestrian
40	Access Granted	Pedestrian
41	Access Granted	Pedestrian
42	Access Granted	Pedestrian
43	Access Granted	Vehicle and Targeted Pedestrian
44	Access Denied	-
45	Access Granted	Pedestrian

Table 6 - Allotments Inspected.

5.5.1 Personnel

The following table (Table 6) lists the participants in the field investigation.

Date	Name	Role
04 March 2013	Andrew Orr (TerraCulture)	CHA and Senior Archaeologist
	Mike O'Connor (TerraCulture)	Assistant Archaeologist
	Wade Garvey (Wurundjeri)	Field Representative
	Sean Wandin (Wurundjeri)	Field Representative
05 March 2013	Andrew Orr (TerraCulture)	CHA and Senior Archaeologist
	Mike O'Connor (TerraCulture)	Assistant Archaeologist
	Gary Galway (Wurundjeri)	Field Representative
	Willy Xibberas (Wurundjeri)	Field Representative
07 March 2013	Andrew Orr (TerraCulture)	CHA and Senior Archaeologist
	Mike O'Connor (TerraCulture)	Assistant Archaeologist
	Jason Tweedie (Wurundjeri)	Field Representative
	Thane Garvey (Wurundjeri)	Field Representative
08 March 2013	Andrew Orr (TerraCulture)	CHA and Senior Archaeologist
	Mike O'Connor (TerraCulture)	Assistant Archaeologist
	Jason Tweedie (Wurundjeri)	Field Representative
	Thane Garvey (Wurundjeri)	Field Representative
12 March 2013	Andrew Orr (TerraCulture)	CHA and Senior Archaeologist
	Mike O'Connor (TerraCulture)	Assistant Archaeologist
	Sean Wandin (Wurundjeri)	Field Representative
	Wade Garvey (Wurundjeri)	Field Representative

Table 7 - Field Participants

5.6 Survey Results

Survey was carried over 11 of the 15 properties located within the PSP. A summary of results is provided in Table 7 below.

Survey Unit	Landforms	Ground Disturbance	Exposure (%)	Visibility (%)	Estimate of Effective Coverage	Aboriginal Places identified	Archaeological potential
31							
32	Plain, Watercourse, Stony Rises	Low	1%	50%	0.5%	Donnybrook 2 (Artefact Scatter),	High (Stony Rises, Watercourse)
33	Plain, Watercourse, Wetland	Moderate	5%	80%	4.0%	Donnybrook 3 (Artefact Scatter),	High (Stony Rises, Watercourse, Wetlands)
34							
35							
36	Plain, Stony Rises	Moderate	3%	100%	3.0%	0	High (Stony Rises)
37	Plain,	Very High	20%	10%	0.2%	0	
38	Plain	Very High	1%	80%	0.8%	0	
39	Plain	Very High	2%	50%	1.0%	0	
40	Plain, Stony Rises	Low	1%	80%	0.8%	Donnybrook 4 (Low Density Artefact Distribution)	High (Stony Rises)
41	Plain, Stony Rises	Low	1%	60%	0.6%	0	
42	Plain, Creek, Stony Rises	Moderate	5%	80%	4.0%	0	
43	Plain, Creek, Stony Rises,	Low	1%	50%	0.5%	VAHR 7822-0711 (Scarred Tree)	
44							
45	Plain, Creek, Stony Rises	Low	1%	50%	0.5%	Donnybrook 1 (Artefact Scatter),	

Table 8 - Allotments Inspected.

Property 36 fronts Donnybrook Road to the south and borders the railway line to the west. It largely consists of open paddock with occasional small stony rises. Pasture grass was short at the time of assessments and there were frequent soil exposures resulting from overgrazing, stock and vehicle traffic and the recent mechanical movement of basalt boulders. This area appeared highly disturbed, however immediately south of the house there is a moderate sized stony rise with high archaeological potential. Although no Aboriginal Cultural Heritage was identified during surface survey, there remains a high potential (likelihood) for artefacts to be present on all stony rises. A particularly well preserved stony rise is located south of a residence and metal recycling area in the east of the property. The presence of uncleared rocks and boulders suggests that this rise has undergone minimal disturbance as a result of non-indigenous land-use practices. As such, it has a higher potential to contain in situ sub-surface archaeological deposits when compared with partially cleared rises in the surrounding farmland.



Photograph 1 - Stony rise to south of house in Property 36. Photo facing north.



Photograph 2 - Property 37 viewed from the rear. Photo facing south.

Property No. 37 fronts Donnybrook Road, immediately to the east of Donnybrook Railway Station. It consists of the Donnybrook Hotel and environs. This property assessed as having low archaeological potential as it is largely covered in buildings and sealed or gravel surfaces.



Photograph 3 - Inspecting the ground surface in Property 39. Photo facing east.



Photograph 4 - Landscaped surface around Property 39. Photo facing south.

Property 38 consists of a small lifestyle block on gently sloping ground. The north of the property is largely covered in buildings and modified surfaces, while the south consists of level featureless fields. The north of the property appears heavily disturbed and the south does not contain any archaeologically sensitive landforms. Therefore, this entire property was assessed as having low archaeological potential.

Property 39 consists of a small lifestyle block containing a residence and a large number of outbuildings as well as a heavily modified and landscaped garden. The owner indicated that the entire property has been levelled and shaped by machine, and this is verified when comparing the property to the surrounding, less disturbed farmland. This property was assessed as having very low archaeological potential as it is extremely unlikely to contain undisturbed artefacts or archaeological features.



Photograph 5 - Stony rises in property 41.
Photo facing south



Photograph 6 - Landscaped surface
around Property 38. Photo facing south.

Property No. 41 is accessed through a farm and dairy complex fronting Donnybrook Road. A cluster of dispersed mature indigenous trees in the southeast was fully inspected but no evidence of cultural scarring was present. The landscape is typified by level plain containing occasional stony rises, with rises most frequent in the north. Two types of stone feature were noted during the survey, both located on stony rises in the south west of the property. The first consists of two circular features on a stony rise, both with internal measurements of 2.1m. The exact function is unknown, but given the proximity to the farm complex, the absence of soil build-up at the base of the stones, and the presence of a historic feature on a nearby rise, these have been assessed as non-indigenous in origin and most likely associated with historic farming practices. The second feature is a low wall, square in shape and consistent in dimension with a holding pen for cattle or sheep. This has also been assessed as non-indigenous in origin. No Aboriginal artefacts or Aboriginal archaeological features were identified.



Photograph 7 - Circular stone feature in
property 41. Photo facing north west



Photograph 8 - Square stone feature in
property 41. Photo facing north

Property 42 consists of a small lifestyle block on undulating ground. The north of the property contains buildings and animal pens, while the south consists of garden and small fields. Although modified, disturbance within the property appears to have been localised, based on surface inspection. Given the absence of archaeologically sensitive landforms, this entire property was assessed as having low archaeological potential.



Photograph 9 - Merri Creek in property 45.
Photo facing south east



Photograph 10 - Prominent rise in
property 41. Photo facing west

Property Nos. 43 and 45 are discussed together as they form part of the same landholding, being used for low-intensity grazing at the time of assessment. These properties consist of open grassed paddocks of plain containing occasional stony rises. The properties were largely covered in knee to chest high grass at the time of assessment, thus limiting vehicle access to the west of this survey area and severely restricting ground surface visibility overall with the exception of cleared tracks and obtrusive stony rises. A large number of stony rises were identified and targeted for surface inspection; however it was noted that there may be other stony rises of low relief obscured by the tall grass cover that were not identified. Two scarred trees had previously been recorded on the banks of Merri Creek (VAHR 7822-0711 and VAHR 7822-0712). It was possible to re-identify one of these trees (VAHR 7822-0711). The second tree was not identified and it is presumed to be no longer present. One artefact scatter (VAHR 7922-1316, Donnybrook 2) was identified in association with a stony rise in close proximity to the creek. No other Aboriginal artefacts or features were identified. The stony rises were assessed as having high archaeological potential, particularly those on the banks of Merri Creek



Photograph 11 - View from Stony Rise in
property 32, facing south west

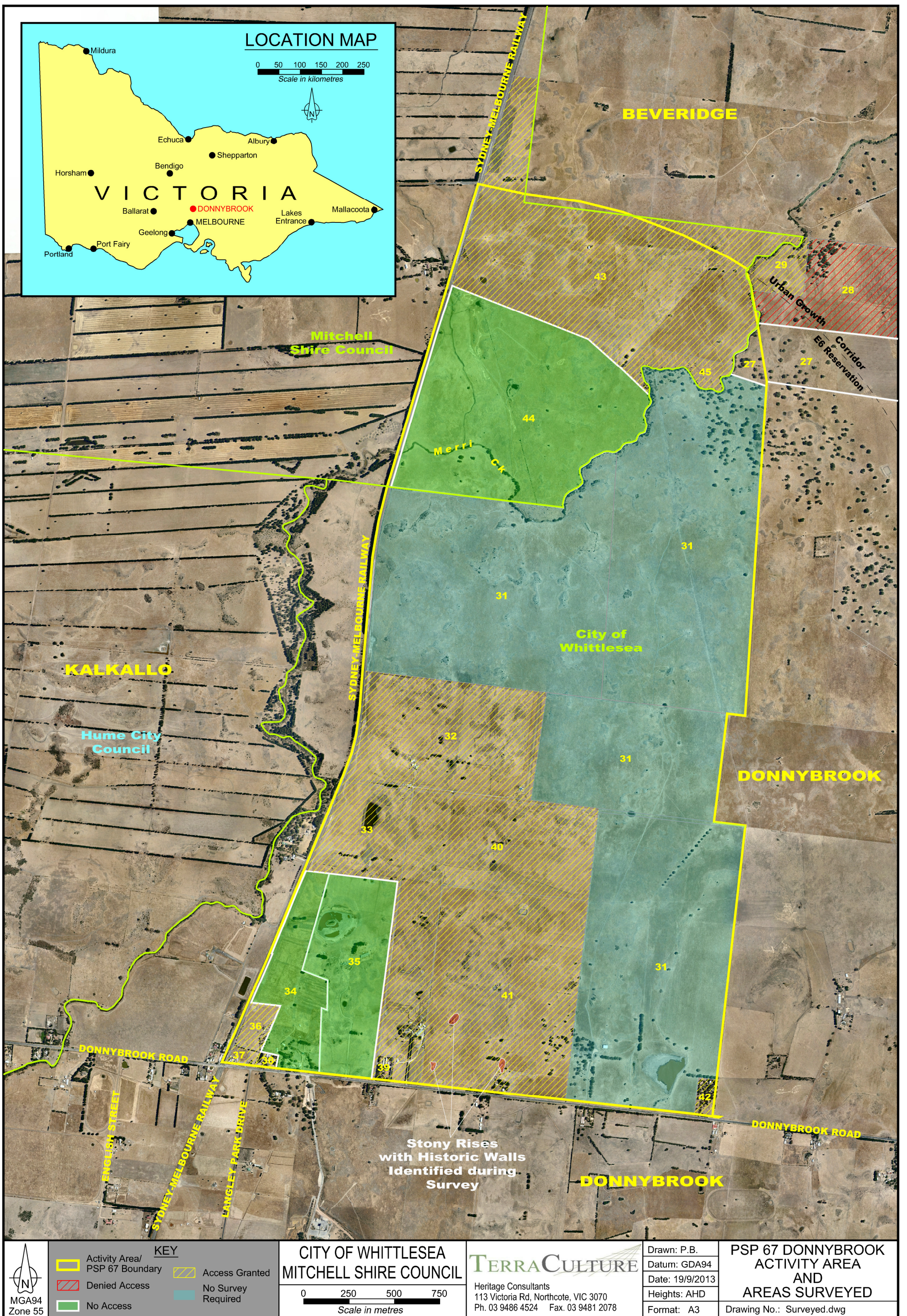


Photograph 12 - Dam/former wetlands in
property 33. Photo facing north

Property Nos. 32, 33 & 40 are discussed together as they form part of the same landholding, being used for intensive grazing associated with a dairy, cheese farm and restaurant, all located within this survey area. The highest levels of disturbance were noted in the vicinity of the dairy complex in the south of property 30, and in the east of property 32, where a small airfield has been constructed. Elsewhere, this survey area consists of open grassed plain with low to moderate sized stony rises. In the south of property 33, some of these rises have been partially disturbed through boulder removal; however this has also increased the level of

ground surface visibility in some instances. A large dam visible in the middle of property 33 has been constructed at a natural low-point and very likely represents the former location of a wetlands, now prevented from draining westwards to Merri Creek. This wetlands is likely to have contained a broad range of seasonal resources which are likely to have been a focus for past Aboriginal activity. As such, the wetlands has been assessed as having high Aboriginal archaeological potential.

Artefact Scatters associated with prominent stony rises were identified at two locations (VAHR 79822-3600, Donnybrook 3 and VAHR 7822-3601, Donnybrook 4), while a third stone artefact site, a Low Density Artefact Distribution (VAHR 7822-3596, Donnybrook 5) was also identified on low relief stony ground surface. No other Aboriginal artefacts or features were identified and the area was assessed as having high archaeological potential, particularly on the stony rises and in the vicinity of the large dam/former wetlands. An ephemeral water course, dry at the time of assessment, was also identified running from east to west towards Merri Creek. The vicinity of this temporary water course (a 50m buffer) was assessed as having high archaeological potential.



MAP 4: Showing Areas Surveyed.

5.6.1 Aboriginal Cultural Heritage Identified During the Survey

In total, four new stone artefact sites and one previously recorded scarred tree were identified during the surface survey.

VAHR 7922-1316, Donnybrook 2

This Aboriginal Place consists of a stone artefact scatter of 11 artefacts associated with a stony rise located 100m to the west of Merri Creek. The presence of a single mature eucalypt has attracted cattle and kangaroos that have largely removed grass cover through over-grazing and trample, affording very good ground surface visibility at this location and leading to the identification of eleven stone artefacts on the crest and slopes of this distinct stony rise. It is very likely that there are additional stone artefacts in a sub-surface context throughout this landform. Therefore, the extent of this Aboriginal Place has been defined as the extent of the stony rise.

Site Contents: Eleven stone artefacts

Contexts: Surface

Primary Location (GDA 94 Zone 55): 323394 / 5846968

Integrity: Good, although localised disturbance on surface through stock trample

Archaeological Significance: High owing to potential for *in situ* sub-surface archaeological deposits (based on a surface survey only; this assessment may change with additional investigation).

Site extent: 55 metres (maximum dimension in plan)



Photograph 13 - View of Donnybrook 2, facing northwest



Photograph 14 - Exposed artefacts at Donnybrook 2

VAHR 7822-3600, Donnybrook 3

This Aboriginal Place consists of a stone artefact scatter of 11 artefacts associated with a low stony rise. The stony rise has undergone a high level of disturbance in the recent past, presumably by machine, thus exposing artefacts in the disturbed soil. Eleven artefacts were visible at the time of assessment, and it is very likely that there are additional stone artefacts in a sub-surface, albeit partially disturbed context. Therefore, the extent of this Aboriginal Place has been defined as the extent of the stony rise.

Site Contents: Eleven stone artefacts

Contexts: Surface

Primary Location (GDA 94 Zone 55): 322192 / 5844704

Integrity: Varies from good to poor in parts due to disturbance by machine

Archaeological Significance: High – although partially disturbed, there remains the potential for sub-surface archaeology *in situ* sub-surface archaeological deposits in undisturbed portions of this Aboriginal Place (based on a surface survey only; this assessment may change with additional investigation).

Site extent: 43 metres (maximum dimension in plan)



Photograph 15 - View of Donnybrook 3, facing east



Photograph 16 - Exposed artefacts at Donnybrook 3

VAHR 7822-3601, Donnybrook 4

This Aboriginal Place consists of a stone artefact scatter of 11 artefacts associated with a low stony rise. Overgrazing has led to high ground surface visibility leading to the identification of eleven artefacts. It is very likely that there are additional stone artefacts in a sub-surface context throughout this landform. Therefore, the extent of this Aboriginal Place has been defined as the extent of the stony rise.

Site Contents: Eleven stone artefacts

Contexts: Surface

Primary Location (GDA 94 Zone 55): 321232 / 5844114

Integrity: Good, although localised disturbance on surface through stock trample

Archaeological Significance: High owing to potential for *in situ* sub-surface archaeological deposits (based on a surface survey only; this assessment may change with additional investigation).

Site extent: 74 metres



Photograph 17 - View of Donnybrook 4,
facing northwest



Photograph 18 - Exposed artefacts at
Donnybrook 4

VAHR 7822-3596, Donnybrook 5

Donnybrook 5 is a stone artefact site consisting of three artefacts located within close proximity to each other. As such, they have been recorded as a Low Density Artefact Distribution (LDAD) in line with previous guidance from the Site Registry at AAV.

Site Contents: Three stone artefacts

Contexts: Surface

Primary Location (GDA 94 Zone 55): 321776 / 5844019

Integrity: Poor (disturbed)

Archaeological Significance: Low – these artefacts do not appear associated with any distinct landforms or soil deposits (based on a surface survey only; this assessment may change with additional investigation).

Site extent: The point locations of the three artefacts



Photograph 19 - Artefact from Donnybrook 5

VAHR 7822-0711, Bald Hill 3

This Scarred Tree has previously been recorded by Ellender (1995) as a probable Scarred Tree. It was re-identified during the current assessment at a location different to both the location given on the site card and its current registered location on the Victorian Aboriginal Heritage Register. The tree containing the scar had been dead at the time of initial recording and there had been no growth or noticeable deterioration by the time of the current assessment.

Site Contents: Mature Eucalypt with single scar

Primary Location (GDA 94 Zone 55): 323141 / 5846826

Integrity: Good

Archaeological Significance: High – scarred trees are a diminishing in number and provide visual evidence of Aboriginal occupation in what is now an otherwise highly modified pastoral landscape.



Photograph 20 - Scarred Tree, VAHR 7822-0711

5.6.2 Conclusions from the Ground Survey

The Standard Assessment determined that the properties 32, 33, 40, 43 and 45 all contain known Aboriginal Cultural Heritage and that there is a high potential for additional Aboriginal Places to be present within the Donnybrook PSP area. Stony rises are very common, and along with permanent sources of potable water such as Merri Creek, are likely to have acted as focus points for past Aboriginal activity. Three Registered Aboriginal Places were identified in association with stony rises where high levels of ground surface visibility were encountered. Poor ground surface visibility acted as a constraint to identifying additional cultural material over the remainder of the survey area.

Ground surface visibility is influenced by many factors. These include the presence of long grass, cropping, land use activity, recent rainfall and animals. These factors may obscure or reveal Aboriginal Cultural Heritage (especially stone artefacts) depending on specific site condition on any given day. Many archaeological sites are located below the surface and may only be revealed through subsurface testing. As a result, a ground surface survey should not be considered as a definitive method for assessing archaeological potential.

At this stage heritage significance is only discussed in terms of the known Aboriginal Places and not for the landforms discussed below. The landforms are discussed in terms of their archaeological potential and not heritage significance. This is because it is not possible to assess the significance of a landform without the presence of a Heritage Place or direct information from the RAP.

Flat Basalt Plains

The flat basalt plains within the Donnybrook PSP area have been assessed as having low Aboriginal archaeological potential in accordance with the regional predictive model. The low-lying plains are likely to have been inundated periodically and as such are unlikely to contain complex archaeological site types such as camp sites or artefact scatters. It is likely that isolated artefacts (Low Density Artefact Distributions) are present at dispersed locations on the flat plains as a result of tool maintenance and loss or discard during travel but the numbers of such artefacts are likely to be so low as to make them largely archaeologically invisible.

Stony Rises

This landform unit has been assessed as having high potential for Aboriginal archaeological sites in both a surface and sub-surface context. Three Artefact Scatters were identified in association with Stony Rises during the current assessment (VAHR 7922-1316, VAHR 7822-3600 and 7822-3601). Based on this and the results of other assessments nearby, it is likely that additional stone artefact scatters are present in soil deposits associated with the basalt stony rises within the current Activity Area.

Creeks

Sources of potable water as well as associated resources makes the vicinity of Merri Creek an area of high potential for the presence of Aboriginal Cultural Heritage, whether it be scarred trees, artefact scatters or camp sites. The identification of these places is influenced by the land use history of properties and whether the trees have been cleared and the land surface significantly disturbed. In this case no new scarred trees were located; however one previously identified scarred tree (Bald Hill 3) was re-identified. A new stone artefact site (Donnybrook 1) was identified on a stony rise within 100m of Merri Creek. Similarly, Donnybrook 4 was identified within 50m of an ephemeral watercourse running towards Merri Creek.

It is well documented that Aborigines often made their base camps on Creek banks (Ellender 1997: 32). Relatively high sections creek bank along Merri Creek are likely to contain artefacts in shallow soil deposits that have formed in depressions between sections of exposed rock. Stone artefact sites on low lying ground next to the creek are likely to have been impacted by flooding events; either protected through burial by alluvium or with all evidence being destroyed through scouring and artefacts potentially being deposited elsewhere downstream. Results of recent investigations nearby (e. g. Orr Pending) indicate that Aboriginal Places of highest scientific significance occur within a 200m corridor of Permanent watercourses such as Merri Creek. This also co-incides with the arbitrary distance of 200m used in the Aboriginal Heritage regulations as an area of Aboriginal Cultural Heritage Sensitivity.

Watercourses

The role of ephemeral watercourses is less well understood in relation to the archaeological record. In the case of the current Activity Area, the two tributaries of Merri Creek were dry at the time of assessment and are therefore likely to have provided only temporary sources of potable water and associated resources. Thus, they are less likely to have been accessed regularly and associated artefact scatters are likely to be of a lower density than those associated with Merri creek itself. Similarly, these tributaries have the potential to carry far less water than the creek itself and the impact of flooding events in terms of soil movement is likely to have been far less extensive. Therefore, a smaller corridor of 50m has been assessed as being relevant to ascribing an associated area of archaeological potential.

Wetlands

Although not as well documented as Creeks such as Merri Creek, wetlands are also likely to have been a focus of Aboriginal activity in the past. The broad nature of wetlands generally provided a much larger area than a creek from which to procure food, fibre and other resources. As with the ephemeral watercourse, prior to damming

Survey Summary

The survey identified four new stone artefact sites and re-identified one previously recorded scarred tree;

- Donnybrook 2, VAHR 7922-1316
- Donnybrook 3, VAHR 7822-3600
- Donnybrook 4, VAHR 7822-3601
- Donnybrook 5, VAHR 7822-3596
- Bald Hill 3, VAHR 7822-0711

The areas of sensitivity are outlined in Table 11.

Landform Unit	Number of Aboriginal Places	Archaeological Potential
Flat Basalt Plains	None	Low
Stony Rises	4	High
Creeks, Waterways and Wetlands	1	High

Table 11 Summary of Sensitivity Assessment

6. Cultural Heritage Management

The following recommendations have been prepared;

Recommendation 1: Preparation of Cultural Heritage Management Plans

CHMPs are recommended for future development activities at all properties with the exception of property 39. The Aboriginal Heritage Act 2006 allows for the preparation of CHMPs that are Mandatory (triggered by the Aboriginal Heritage Regulations 2007, required by the Minister, or triggered by an Environmental Effects Statement) or Voluntary. The Act allows for the preparation of a Voluntary CHMP where regulatory triggers are not met².

CHMPs can occur as a single CHMP covering the entire PSP or as several smaller permits covering parcels of land as part of staged development applications. The Registered Aboriginal Party (RAP) for this area is the Wurundjeri Tribe Land Compensation and Cultural Heritage Council Inc. advised the GAA that they prefer that PSP 1067 is undertaken in smaller parcels of land rather than as a whole (pers. comm. Catherine Tucker, TerraCulture with Fiona McDougall, GAA). CHMPs enable subsurface testing to be undertaken and in this way a more thorough understanding of archaeologically sensitive areas (including stony rises), site extents and significance of the identified sites can be undertaken. Subsurface testing would provide a level of assessment of the Activity Area that is not possible through survey alone. Undertaking CHMPs early in the PSP process would allow for sensitive Places to be identified to specific locations and then for the urban planning to address retention and protection of Aboriginal Places.

Recommendation 2 - Vegetation removal

Extensive grass cover prevented the ground surface assessment in most of the Activity Area. If possible, a regulated burn-off could assist visibility as it removes all grass and allows greater inspection of the ground surface. Archaeological surveys are often undertaken following bushfires (if possible), and it has proven to be an effective situation for identifying archaeological sites. Other methods of vegetation removal such as slashing actually cover the ground and inhibit visibility, while poisoning is problematic for environmental considerations. In addition, mechanical equipment is often ineffective for vegetation removal on stony rises and may potentially disturb the soil profile. A controlled burn-off is a suggested means of vegetation removal but it is not a requirement for any further assessment. Alternatively should none of these suggestions be suitable then allowance should be made for a subsurface testing methodology that would address the issue of poor ground surface visibility. This would mean a longer program of subsurface testing using a combination of mechanical and hand investigation.

2

[http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e92000e23be/481F4F0770858034CA257169001D1F4A/\\$FILE/06-016a.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e92000e23be/481F4F0770858034CA257169001D1F4A/$FILE/06-016a.pdf)

Recommendation 3 - Protection of Aboriginal Places

All Aboriginal cultural heritage places should be considered for retention, in consultation with the Registered Aboriginal Party: Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated. If not possible to retain all Places, retention of a sample of the Aboriginal Places could occur within open spaces and reserves, subject to future discussion between stakeholders including the Wurundjeri and Local Council. Management measures for individual Aboriginal Places will be developed on a case by case basis through future CHMP processes (see recommendation 1 above).

Owing to the limitations of the assessment (poor ground surface visibility and that no subsurface testing was undertaken) it is likely that there are substantially more Aboriginal places in the Activity Area than those identified to date.

Recommendation 4: Stony Rises

The landform of PSP 1067 has been identified as containing stony rises. Two of these are located in Parcels 45, 32 and 33 and have been identified with Aboriginal Places (Donnybrook 2, 7922-1316, Donnybrook 3, VAHR 7822-3600 and Donnybrook 4, 7822-3601 respectively) and should be protected if possible. The remaining stony rises in PSP 1067 have not been identified with Aboriginal Cultural Heritage (possibly because of poor visibility) but have been identified as potentially sensitive (see Map 5). However, not all stony rises will actually contain Aboriginal Cultural Heritage, but this can only be determined by subsurface testing. Should Aboriginal Cultural Heritage be identified on stony rises during the CHMP process then retention of these landforms should be considered.

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National Heritage Database website, <http://www.environment.gov.au/cgi-bin/ahdb/search.pl>

National Trust (Victoria) website, <http://www.nattrust.com.au/info.asp?pg=hpsearch>

Planning Schemes Online, <http://www.dse.vic.gov.au/planningschemes/>

Legislation and Regulations

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Environment and Heritage Legislation Amendment Act (No. 1) (2003)

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Australian Heritage Council (Consequential and Transitional Provisions) Act (2003)

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